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CONTENTS

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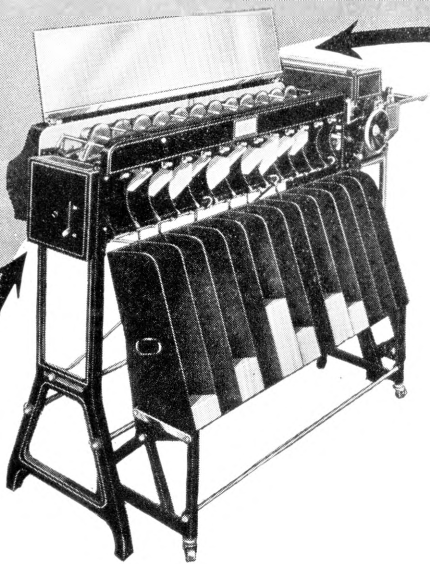

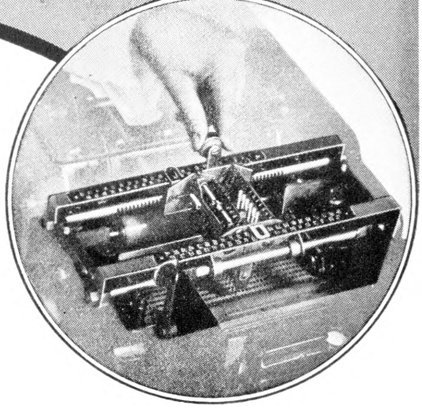

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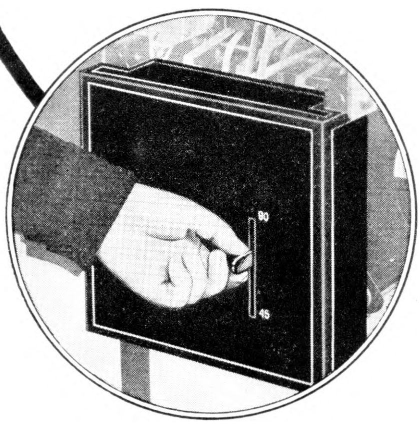

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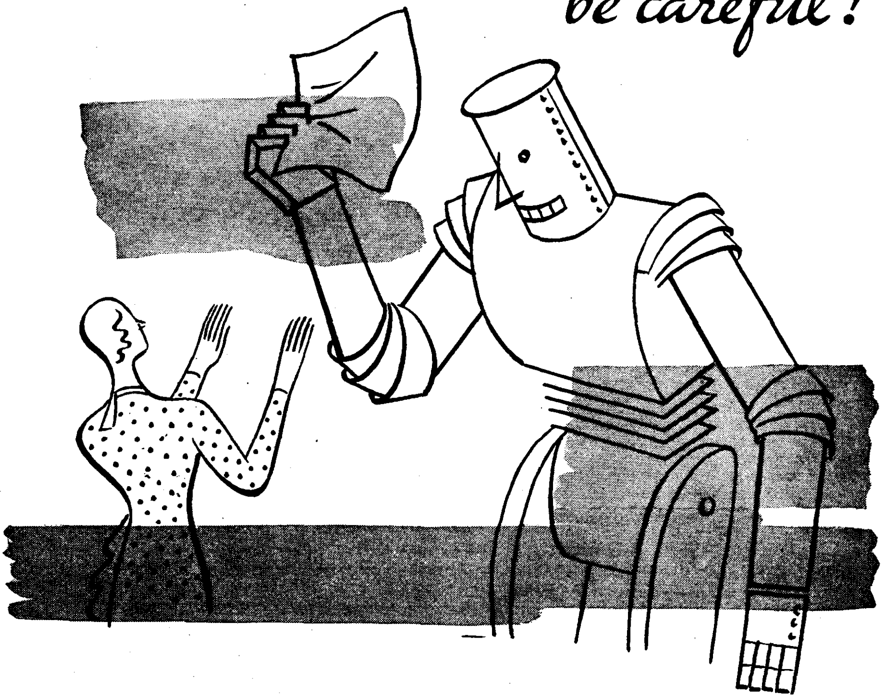

● Of course she's being absurd. A machine may be thoroughly efficient, but it lacks the milk of human kindness. Your bookkeeping machines, for example, can't understand that they must go easy with cheap ledger paper that can't stand the gaff. So you must give them papers like Stonewall or Resolute Ledger —papers built to meet machine methods. Flexible, they'll bend around the rollers, take the punishment of hammering type, and come up flat and snappy, ready for filing, binding, or a lot more handling. And they're permanent, due to their tough, durable rag fibre. Available in white, buff, and blue; standard sizes and weights. Portfolio of samples on request. Neenah Paper Company, Neenah, Wis.

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The JOURNAL *of* ACCOUNTANCY

Official Organ of the AMERICAN INSTITUTE OF ACCOUNTANTS

A. P. RICHARDSON, *Editor*

VOL. 57 APRIL, 1934 No. 4

EDITORIAL

Quo Vadis, Domine? The great brake on the wheels of progress today is not any reluctance on the part of business to advance—indeed throughout the realms of industry and commerce there is something approaching an eagerness to go ahead. It is the paralyzing uncertainty of what a day may bring forth that holds us back. On every side one hears the questions, "What does it all mean? Whither are we bound?" And then follows the demand, "Tell us, if you can, what is the ultimate purpose." If that information could be vouchsafed us it would help enormously. Even if the undisclosed goal be something which we would not ardently desire, it would be vastly better to know what it is than not to know. Thousands of rumors are passing from man to man. Some say that our complex experimentation is along the road to socialism. Others affirm their belief that we are attempting to overthrow the whole structure of capitalism. But who knows? We are like an army marching and countermarching with no assurance that we shall reach a bivouac at nightfall; or perhaps the simile would be more accurate if we said that we are like an army marching through the night without knowledge of place or time. Whatever be the underlying policies of the government—in all its three great divisions—we are entitled to know. The people as a rule are reasonable. They do not want to impede—their amazing patience is proof of that. But the authority vested in president and congress is a grant by the people, and they should be told exactly what it is that their elected officers are trying to do for the welfare of the country.

Perhaps there is some infinitely wise scheme in the minds of the government which will lead us all into the green pastures; perhaps the plans which are unrevealed will not meet with our approval at all. Whichever be the truth of the matter, the time has come when we must have explanation of the general purpose so that we may be able to take up the task of life and carry it onward. If the purposes of the administration are acceptable they will receive better support than they can obtain without understanding. If the purposes are contrary to the public will, the voice of the people should be heard that it may be obeyed. That is fundamental of the ordination of all republican theory of government.

A Monetary Revolution Let us consider briefly the monetary revolution which is taking place. It has always seemed to us—and it still seems—that the voluntary departure from the gold standard was neither necessary nor honorable. This is, we are convinced, the prevailing belief among men whose vocations are in the financial field. The expropriation of personal property in the form of gold was part of the same needless repudiation of the principles of the constitution and of common right. (One can only regret that the supreme court has not been required to decide these questions.) The taking over of the gold reserves of the federal reserve banks at a price which the government has declared to be obsolete and the announcement that the difference between the price paid and the current factitious price constituted a profit to the government are a severe tax upon the credulity of the more intelligent members of the community. A good many people will find it impossible to understand how an artificial depreciation of the value of the dollar and an equally artificial enhancement of the value of gold set against each other can yield either profit or loss. It sounds very much like the hallucination of an impractical theorist—such a theorist, perhaps, as may be descried now and then expounding his obsession upon the dais of a college lecture room. If a merchant had a hundred tons of pig iron, worth, in the ordinary market, say, $20.00 a ton (we are thinking now of stable dollars) and two hundred tons of coal worth $10.00 a ton and if he revalued these items by reducing the book worth of his iron fifty per cent. and raising the book worth of his coal fifty per cent., would any accountant permit the merchant to report a profit on the coal? This sounds as silly as it is. But wherein lies the difference between our supposititious merchant and a government which proclaims a profit upon depreciating the dollar and raising the value of gold which the dollar once did represent? The ratio is different but the total value is not changed. Therefore where is the profit in a shuffling of figures? There are many other things as confusing as this to the man in the street—even to the man in Wall street. We can not understand what is back of all the strange notions which are propounded. We have yet to meet a man who even professes to understand the plan or the purpose. Is it not then vitally important that our ignorance be dispelled? No one can give strong and helpful approval to something which he can not identify.

Questions Are Arising No human being is omniscient. Every man should be glad to learn the truth and the reason for the things which bewilder him. Possibly the president and his advisors have some splendid plan for us all which will usher in the true Utopia. But we shall all wait much more contentedly and humbly for the denouement if we may be told what it is to be. This is no question of party politics. In fact, there seems to be more restlessness among the members of the party in power than among the republicans. Today one seldom hears the name of either party mentioned. Men are divided into those who disapprove and those who agree with the policies of the administration so far as they think they understand them. Accountants are supposed to be level-headed men who can see as far through a stone wall as any one can. Their experience and native faculties make them incredulous and analytical. In the membership of the profession in America probably the numbers of democrats and republicans are approximately equal, and their opinions, therefore, should be fairly representative of the thinking electorate. Some of them are convinced that the present obscurity is merely the darkness before the dawn of a brilliant day. Others—it may be the majority—are skeptical. They do not foresee the coming of the new day hastened at all by the abandonment of the lessons learned from history. All accountants, we believe we may safely say, are seekers after truth. Whether they approve or condemn the developments of the recent past, they are all with one accord analysts and as such they must desire a revelation of the facts, the plans, the ultimate purposes so that their opinions may be based upon a foundation of something more than fervent hope. It would be a happy day indeed for America, if all the people—except those who are blinded by an antique partisanship—could be assured of the soundness of the government's policies. At least nine-tenths of the voters of this country are ready to yield unstinted support to any plan which the president or his congress or even his unelected advisors may devise for the betterment of conditions, but Americans are not people who will sign a document without reading it. All these incomprehensible departures from what we have believed to be the American tradition may be of surpassing merit. But how can we feel assurance when we do not understand? If the representatives who speak for the administration will tell us the final intent of all the innovations—if they will tell us without threat or invective so that our senses may be undisturbed by resentfulness—we shall be able to determine whether we will or will not approve. And in the long run approval by the common people must prevail.

Let Us Know the Purpose

The president, who has now been a little more than a year in office, has faced a terrific problem. He has, however, not been obstructed by congress and he has had a magnificent goodwill of the people to stimulate him. Any man elected by an overwhelming majority to the highest office in the gift of the nation is entitled to the most sympathetic tolerance and the whole-souled loyalty of the people. These things have been accorded in the past year with an unprecedented approach to unanimity. Now the first year is past, and some of us are distressed by the mutterings of discontent which grow louder every day. No one apparently has the slightest desire to embarrass the administration, but there are evidences of a too radical upheaval of our form of government. We seem to be trying experiment after experiment without due thought of the cost of failure and without any definite program for the future. Every owner or manager of a business enterprise must be concerned about the uncertainty of the outlook. Industry and commerce are not going on as they are ready to do. They are halting between two opinions, or perhaps it would be better to say halting because of no opinions, about what is ahead. If the administration has a definite purpose running through all the various and unexpected repudiations of the traditional America, that purpose can be greatly aided by taking the people into the secret. If that purpose be clearly explained without exaggeration or ambiguity, the people will not be slow in giving it irresistible momentum if they consider it good. If they consider it unwise or worse, they will not hesitate to let their views be known and thereby to assist the administration to adopt a course in harmony with the public will. Either approval or rejection must come sooner or later. In every way the cause we all have at heart will be served best by frankness.

Gnats and Camels Everyone who read the newspapers of March 10th must have been greatly amused by the Associated Press report from Washington that Rear Admiral Richard H. Leigh, president of the navy general board, who served as chief naval advisor at the Geneva disarmament conference, had made an error in the expense account which he presented. According to the report, Admiral Leigh gave the hour of his arrival in port as 8:30 a.m. and reckoned his expenses from that hour. Now he is said to have received a letter from the paymaster in Paris stating that inquiry had disclosed that the ship did not dock until 9:00 a.m. and that he had been overpaid the sum of twelve cents. If one wished to find an illustration of the foolishness of excessive accuracy in detail, no better example could possibly be discovered. It would be instructive and entertaining if the government would make known the amount of time and the expense involved in tracing this alleged error and in obtaining refund. Of course, every one recognizes that there must be absolute accuracy in important matters, but it does seem the height of absurdity to lend the great weight of official routine to recover an item of twelve cents. Perhaps the matter is made slightly more ridiculous by the uncertainty of the true value of twelve cents. If the dollar is worth only sixty old-fashioned cents, twelve cents are worth only seven and one-fifth cents in our ultra-modern currency. There is, however, something rather more important than the question of twelve cents or any other small amount. It is the whole effect of too intense straining at a gnat even if no camel be swallowed. The question which is of peculiar interest to accountancy is the point at which detail becomes expensive. It would undoubtedly have been much cheaper for the government to have failed to investigate the hour of the docking of a boat and to have allowed the officer who is said to have made the error to receive the unholy profit of twelve cents. Incidentally it may be mentioned that the expense allowance of six dollars a day upon which this is based is probably almost a third of the actual expenses incurred. It is quite well known that no one can travel in the style to which an admiral is entitled for any such amount as six dollars a day, particularly six dollars today.

Excessive Detail

This story seems to afford an opportunity for drawing the line between accounting and accountancy. Where is the point at which investigation of detail should terminate? There have been many instances in corporate audits in which accountants have freely admitted that they did not investigate details which would be more expensive to analyse than any possible loss which would be overlooked in failure to investigate. For instance, what would be said of the accountant who carried his analysis to such a point that he would discover a shortage of twelve cents in the cash account of a million-dollar corporation? In the conversation of the day one frequently hears the metaphor of the forest and the trees. Here is surely a case in which the government officers involved failed to see the forest because of one very small sapling. As we understand it, it is the duty of bookkeepers to present absolutely accurate statements of receipts and expenditures, but it is not the duty of the accountant to devote valuable time, for which the client must pay, in trying to exhume some buried postage stamp or five-cent carfare. It is, of course, somewhat difficult to know where the exact point of diminishing returns from investigation may lie, but on either side of that point there is no great doubt. Furthermore, in expense accounts it is becoming the practice, even in the most meticulous companies, to accept the word of the employee and not to devote hours of labor and dollars of expense in trying to reveal some unimportant error. Broadly speaking, if an employee can not be trusted to render a fair expense account he should not be an employee. And if here and there errors or minor padding take place, the employer is probably wise when he does not pay much attention to such matters. This should not be interpreted as a suggestion that theft should be condoned. It is intended merely as a demonstration of the folly of chasing pennies which may often lead to the ignoring of really important matters. One often wonders why so many employees are needed by the government of any country. Such incidents as the one which we have cited explain why the administrative offices of governments are more expensively manned than the offices of any company organized for profit.

Practical Instruction We have received from a prominent accountant in Florida an interesting letter describing action recently taken by the Duval county school board. The board consists of five members. These men invited forty or fifty prominent citizens to have luncheon with them for the purpose of hearing a plan which the board had formulated. It appears that the public schools in that district do not provide adequately for vocational instruction, and the board desired to supplement this in some way without adding to the board's expenses. Men representing various professions and businesses were invited to the meeting at which the plan was propounded. The board suggested to its guests that any boy who desired to follow a given calling—for example, accountancy—should be taken into an office in which that calling was pursued. The boy would attend the office five afternoons of the week from one o'clock until five and would there serve as any other clerk, receiving training and doing what he was told. The accountant would undertake to give him instruction, but no money would be paid or received for the services exchanged. Boys so selected would be those who had passed through the second year of the senior school, and, if a boy were suitable and the accountant willing, the arrangement would continue during the last two years of high school. For this stay in the office the boy would receive two credits at school, which would enable the school to graduate him. Further, the school would arrange that the boy should receive special attention in any of the branches of learning in which the accountant thought him deficient.

Coöperation in Training This will be an experiment which will be well worth watching. It seems to involve a partnership between school on the one hand and professional or business office on the other, both parties working together to give adequate and useful instruction in that calling to which the student may be most fitted. It may savor slightly of the apprenticeship system, but it is free from the objections which are usually offered in this country to such a system. It is an extension of the laboratory principle of instruction, and it is quite possible that this venture in Duval county may lead to results which will encourage adoption of similar plans in many parts of the country. Undoubtedly a great advantage will be offered to the boy who really wishes to make accountancy or any other vocation his life work. He will gain a practical knowledge in the office and presumably some theoretical knowledge in the school. Combining these two factors, he should be able to enter college and place his higher education on a firm foundation. Knowing something of the reason underlying the principles of accountancy and having had experience in the application of the principles, his higher instruction in college should have to him far more meaning than he could reasonably be expected to discover without background. It may be felt by some people who do not understand the facts that the accountant would be receiving more than he would give. He would have a clerk on part time without expense in money. The truth is, however, that a boy, however brilliant, who has had no experience is not a great asset in any office. He must be told what to do at every point of the way and his very presence calls for an amount of supervision which would not be needed if an experienced clerk were doing the work. It seems to us an admirable idea to bring about close coöperation between schools and offices. We hear much nowadays of the lack of coöperation between home and school. That is as nothing compared with the prevalent lack of coöperation between the school and business or professional life. The ordinary high-school graduate comes forth with his diploma and a profound lack of knowledge of practical things. He enters an office or a factory and finds it a new world where everything is different. It takes years in many cases for a boy to find his feet in business. He knows nothing of what he is expected to do or of why he is expected to do it. This terrific handicap upon the graduate can be almost entirely lifted before he ventures out into the world if some plan similar to that which we have mentioned can be put into effect. The scheme calls for recognition by the schools of the importance of practical experience and for recognition by business and professional men of the value of theory. So far as we know this experiment is unique. There may be some obstacle to success, but we can not foresee it.

The Slave Market

A reader sends us a postcard received by his firm from which we quote the following paragraph:

"I am a C. P. A. interested in purchasing and managing clients. If you care to sell any, we can arrange a cash payment and convenient terms. If you wish to be assisted by a C. P. A., 1927, of considerable experience, we can arrange that also."

In transmitting this postcard our correspondent says, "I venture to say that numerous examples of soliciting have come to your attention and the writer has no desire to add to your burdens in this matter; however . . . I felt that this particular instance should receive notice."

There seems to be nothing to add to this bald statement of fact, unless it be to express a certain amount of astonishment at the return of the slave market. The notion of buying and selling clients reminds us of the days of Simon Legree. We can see in fancy the so-called accountant dragging his cringeing client to the block and offering him to the highest bidder. He might say, "Here we have for sale a client who is obedient, prompt in payment and not overinsistent upon excellence of work. I offer him to you in the hope that you will find him strictly in accordance with advertised specifications."

"False Entries"

By Clyde B. Reeder

"There ought to be a law against this sort of thing" has, doubtless, been the muttered imprecation of many an auditor upon learning for the first time that the figures before him are not telling the truth. By what will be referred to as "false entry" in this article is meant an entry made in an accounting record which is not true and, in addition, is made with dishonest intention to "cover up" an accounting crime. In some instances the definition must be stretched to include also false alterations of correct original entries and false omissions, that is to say, dishonest neglect to make a true entry.

Not all of the states have "false entry" statutes on their books, and among those that have there is a great diversity as to (1) definition of the crime, (2) application of the law and (3) the penalties provided for its infringement. But perhaps, remembering the predilection of state legislatures to imitate each other in the enactment of new laws (as, for instance, Wisconsin's income tax and Mississippi's sales tax), such statutes are more apt to increase than to be repealed and may, in time, tend to become more uniform in their application.

It seems hardly necessary to say that "false entry" is purely a statutory crime, wherever it exists as law, being like embezzlement, something that could hardly be expected to have developed early in legal history. I have not learned which states were the first to enact such a law. Some have, like the federal government, limited its application to banking corporations; others have confined it to municipal or public records; others have designated only certain classes of municipal offices. Some states have enacted general statutes, practically all-inclusive in scope. And there seems to be nearly every possible combination of these three general groups. The general laws, not limited to specific types of corporations or businesses, are the most interesting, as one naturally expects to find laws governing state banks and municipalities to be inclusive of various prohibitions since such corporations not only derive their powers from the state in which they are organized, but are more or less under state supervision. This discussion will concern chiefly the statutes not limited to specific classes of corporations.

Corpus Juris defines a false entry as "an entry made in a book by an officer of a bank that is intentionally and knowingly false when made, and made with intent to deceive the officers of the bank or defraud the association," and citing, *U. S.* v. *Wilson*, 176 Fed. 806,808, "An entry which is either wholly fictitious or fictitious to some extent." In *U. S.* v. *Graves*, 53 Fed. 634,644, it is "an untrue or incorrect entry." But it follows that "a simple mistake by an officer in making an entry on the company's books, growing out of a clerical error, is not a false entry." Thus it appears that so far as federal laws are concerned, the phrase "false entry" is limited in its application to the books of a bank. There are several states that follow this lead.

The state of Washington (1933 code) has an almost all-inclusive definition: "Every person who shall wilfully or maliciously make any false entry, or fail to make an entry of any material matter in any book or record of account shall be guilty of a gross misdemeanor." But, although this statute leaves little to be desired from the standpoint of brevity and clearness, it has the weakness of classifying the offense as a misdemeanor rather than as a felony, as most other states do. It has the further but minor defect of not covering in specific language false alterations of entries. It is to be doubted if gross misdemeanor provides a penalty heavy enough to greatly discourage the commission of the offense. I have not found any prosecutions under this section of the Washington law.

In the Texas code of 1928 we have these brief but inclusive words: If any person with intent to defraud shall make or cause to be made any false entry in any book kept as a book of accounts or shall with like intent, alter or cause to be altered, any item of any account, kept or entered in such book, he shall be fined not less than $100 nor more than $1,000 or . . . (imprisoned from two to five years). In addition, the bribery of a public officer to make a false entry is prohibited. This definition differs from the Washington law in several respects: first, the offense here is punished as a felony; second, false alterations are prohibited; third, the influencing of another to commit the offense is covered. And finally, it does not cover the failure to make a true entry as distinguished from actually making a false one.

Tennessee's statutes (1932) also have a section of very wide application reading as follows: "If any person or persons mentioned in the preceding section shall make false entries in his own books or records, or the books or records of his employer, or upon the books or records of any depositor or customer, with intent to defraud his employer, or any person whomsoever, every such offender is guilty of a felony, and upon conviction . . . etc." This statute apparently by reference to other sections covers all state officers and all private employers and their employees. This law is of interest for the emphasis placed upon who may commit the offense and the ways in which the offense may be committed, i.e. that it is immaterial whether the books are considered the property of the employer or of the employee, or whether the account may be called a record belonging to an employer or to an outside party.

Alabama (1928) says: "Any officer, agent or servant of any private or municipal corporation, who keeps false books of account, or makes false entries therein, with intent to deceive, injure or defraud such corporation, or the officers or agents thereof, or, if a private corporation, the stockholders therein, must, on conviction, be fined not less than $1,000, and may also be sentenced to hard labor for the county for not more than two years, one or both, at the discretion of the jury." We have here a specific reference as to who may commit the crime, no distinction made between banks and other corporations or between public and private corporations, a distinction between false books and the false entries in them, and a mandatory heavy penalty. All of which appears to require very circumspect behavior on the part of all having to do with corporate accounting in Alabama.

The 1927 code of Florida states with simplicity and brevity: "If any person acting in the capacity of an accountant shall wilfully make any false or misleading statement in writing in regard to any financial transaction or account, such person shall be deemed guilty of a misdemeanor and upon conviction thereof shall be punished by a fine of not exceeding $500 or by imprisonment not exceeding six months, or by both fine and imprisonment in the discretion of the court." It is interesting to note the difference in the severity of punishment as between Alabama and Florida, adjoining states. A mandatory minimum fine of $1,000 is provided in Alabama, while a "not to exceed" fine of $500 is the limit in Florida. Florida has a maximum possibility of six months' imprisonment, while the unlucky Alabaman, convicted of false entry, may labor for two years at hard labor. This is only one of many examples that might be given to reveal the great differences in penalties that have been provided in the various state jurisdictions.

Iowa (1931) provides a slight innovation, as compared with Alabama, by not limiting to corporations, but adding this phrase—"and any employee of another . . . etc." as in the following citation: "Any officer, agent or employee of any corporation who shall knowingly make or knowingly authorize to be made false entries upon the books of such corporation, and any employee of another who shall knowingly make or cause to be made false entries upon the books of his employer, shall be guilty of a felony and, upon conviction, shall be punished by imprisonment not to exceed two years or by a fine not to exceed $5,000 or by both such fine and imprisonment." There is a further point of interest in the Iowa law apparently connoted in the expression "knowingly authorize." Can one authorize a false entry unknowingly? Apparently so in Iowa, and in that case a crime is not committed.

Kansas Laws (1923 compilation) has this to say regarding the crime of false entry: "Every person who, with intent to defraud, shall make any false entries, or shall falsely alter any entry made in any book of account kept by any moneyed corporation within this state, or in any book of account kept by such corporation or its officer and delivered or intended to be delivered to any person dealing with such corporation, by which any pecuniary obligation, claim or credit shall be or shall purport to be created, increased, diminished or discharged, or in any manner affected, shall upon conviction, be adjudged guilty of forgery in the third degree. Third-degree forgery is punishable by confinement at hard labor for not more than seven years." The new features to be considered in the Kansas law are: first, the identification of the crime with the crime of forgery, and, second, the detailed list of ways in which the offense is completed, having reference to changes in the accounts themselves or in items which the accounts represent.

Massachusetts' statute (1932) needs reference because of a special case mentioned. It reads as follows: "An officer of a corporation or an agent, clerk or servant of a person, firm or corporation who makes a false entry or omits to make a true entry in any book of such person, firm or corporation, with intent to defraud, and any person whose duty it is to make a record or entry of the transfer of stock or of the issuing or cancelling of certificates thereof, or of the amount of stock issued by a corporation, in any book thereof, who, with intent to defraud, omits to make a true entry thereof, shall be punished by imprisonment in the state prison for not more than ten years, or in the house of correction not more than one year." The special case is the reference to capital-stock records specifically, not singled out in any other state so far as I have been able to discover.

Minnesota (1927) states the offense (in part) as follows: "Every person who being an officer or in the employment of a corporation, association, partnership or individual, shall falsely or unlawfully and corruptly alter, erase, obliterate or destroy any account, book of accounts, records or other writing belonging to or appertaining to the business of the corporation . . . etc. . . . shall be guilty of forgery in the third degree." Forgery in the third degree is punishable by imprisonment not exceeding five years. The highlight of this statute is the detail with which fraudulent alterations are set forth and made to include erasures, obliterations and destruction, when fraudulent.

New York (1930) says: "A director, officer, agent or employee of any corporation or joint stock association, who, (2) makes or concurs in making any false entry in the books or accounts, or (4) having custody or control of the books wilfully refuses or neglects to make any proper entry in the stock books of such corporation as required by law . . . etc. . . . is guilty of a misdemeanor." This law brings out the point of refusal to make a proper entry as distinguished from the mere neglect to make such an entry.

New Mexico (1929) says: "Every person acting in the capacity of overseer, foreman, bookkeeper, clerk, time-keeper, accountant, etc. . . . etc. . . . who shall make any false entry in any book kept by him, or any memorandum or statement made by him of wages due or owing to any employee or employees of such . . . individual or corporation with intent to defraud shall be deemed guilty of a felony." The punishment is hard labor for a period of from two to five years.

The Virginia (1924) law provides no general definition of false entry except the definition contained in its blue-sky law, reading substantially as follows: "Any person who shall knowingly subscribe to or wilfully make or cause to be made any false statements or false entries in any book of account . . . etc. . . . subject to the provisions of this act (the blue-sky law) . . . etc." The offense is defined as a felony and carries penalties of from

$100 to $5,000 and from one to ten years' imprisonment. There is nothing new in this law aside from the fact that the false entry offense is limited to blue-sky law jurisdiction.

Ohio's (1930) law (Throckmorton's annotated code of Ohio) says a person who, . . . "having charge of the books, minutes records or accounts, or any of them, of a corporation, shall make or cause to be made therein, any entry which is false in any material respect, or shall remove, erase, alter, or cancel any entry therein, knowing that the entries resulting therefrom will be false, shall be personally liable jointly and severally with all other persons participating with him in any such act, to any person, including a subscriber for shares, bonds, notes, obligations or securities from such corporation, or as owner, and a pledger of any shares, bonds, notes . . . or obligation issued by such corporation, for any and all such loss or damage actually suffered and proximately resulting from such act. An action to enforce liability under this section shall not be brought after four years from the time of the act complained of."

Ohio's false-entry law thus differs from all the others in an outstanding feature, namely the remedy lies in a civil action. In other words, false entry, so far as my research has revealed, is not a crime in Ohio. It is further noted that the cancelling of an entry is specifically covered, and that purchasers of securities of a corporation have recourse to the maker of the false entry as above defined. An analogy to the new federal securities act is suggested by this law.

Arkansas (1927 supplement) has a law similar to Ohio's, but stated in a more all-inclusive style, except that there is doubt in my mind as to whether false entries are meant to be included or whether false statements only are prohibited. "A director, officer, agent or employee of any corporation who knowingly and with intent to defraud concurs in the making or publishing any written report, exhibit or statement of its affairs or pecuniary condition containing any material statement which is false shall be liable for all damages caused thereby."

Most states have statutes prohibiting, in one form or another, the crime of false entry by banks and by various classes of public officers. In Louisiana (1915) franchise grantees, upon conviction of having made a false entry are fined $500 or imprisoned one to five years or both. In Louisiana, also, when a false statement is made under oath by a banker, "the person or persons shall be adjudged guilty of perjury and punished according to law."

Building and loan associations, trust companies, safe-deposit companies, industrial loan companies, etc., are specifically mentioned in some states.

A false entry, under its varying applications, may be a misdemeanor, a gross misdemeanor, a felony, or specially punishable as for forgery or perjury, or merely the basis of a civil action. What the punishment shall be depends not so much on the nature of the offense itself, or the amount of the loss caused thereby, as upon the state in which the false entry is made.

Since methods of accounting are similar throughout our country, it would seem that a more uniform treatment of wilful concealment of facts through the medium of false entries may be considered a proper subject for uniform legislation.

Treasury Stock

BY RAYMOND P. MARPLE

So much has been said and written concerning the proper accounting treatment of treasury stock that it may appear an imposition again to introduce the subject. But there has been discernible recently a tendency to take a new view of the handling of this item—a view that gives more emphasis than formerly to matters of corporation law as affecting treasury stock. It is this view that I wish to discuss.

While one finds now and then a revival of the argument as to whether treasury stock represents an asset or a deduction from capital, it is probably safe to say that a majority of accountants would favor the latter treatment for most purposes. It is not intended here to consider the theoretical and practical considerations that have led most accountants to feel that a corporation acquiring stock in itself is reducing its assets and capital, rather than exchanging one asset (cash) for another asset (treasury stock). A statement of these considerations can be found in any advanced accounting text. Time can be better spent in discussing the proper treatment of treasury stock in the net worth section of the balance-sheet and, more specifically, the effect of stock acquisitions on surplus.

It seems probable that this new view of the treatment of treasury stock has developed as a result of studies of the problems connected with no-par-value stock. Writing in THE JOURNAL OF ACCOUNTANCY for April, 1926, Percival F. Brundage reviewed certain court decisions and said, "It is quite evident from these rulings that the purchase of treasury stock is recognized to be a return of capital to the stockholders surrendering their shares, and that the rights of creditors must be protected. It follows that the capital or trust fund should not be reduced and that the purchase should not be made unless the surplus is sufficient to absorb the whole cost thereof."

An even stronger statement was made by Carl B. Robbins in his treatise on *No Par Stock*, published in 1927. "No corporation," says Robbins, "may reduce the amount of its stated capital without the approval of corporate creditors and the consent of the state. The amount of stated capital can not be reduced except by cancellation of the stock certificates. This requires state consent and automatically decreases the amount of capital authorized. Stock that has been canceled has gone out of existence; it is not treasury stock. Obviously, then, the acquisition of treasury stock can not effect a reduction in the amount of stated capital. This fact must be considered in accounting for treasury stock."

Somewhat later in their book on *Capital Stock without Par Value*, Wildman and Powell said that, when "in the acquisition of treasury stock a corporation parts with assets, the effect is a reduction of capital. How, then, can a corporation reduce its capital and meet its legal requirements with respect to stated capital? While the question has not been adjudicated so far as is known, grave doubt has been expressed by well-regarded legal talent that a corporation may acquire its own shares without impairing its stated capital, unless there is in surplus an amount equivalent to the value at which the stock is acquired."

But the strongest indictment against the current method of accounting for treasury stock was contained in a speech by Fletcher Lewis, made before the Michigan Society of Certified Public Accountants in March, 1933, when he said, "It is my contention that a balance-sheet should not only clearly reflect the actual effect upon the assets of the corporation resulting from the repurchase of issued shares, but that accountants, under penalty of possible liability for damages, have no licence to adjust the capital account of a corporation in violation of statutory provisions. Time and again officers, directors and shareholders have been misled by the practice. . . . The principle involved is that the capital of the corporation is an amount determined by law and subject to change only following the procedure prescribed by statute for the formal reduction of capital. A corporation does not effect a reduction of its legal capital by the act of purchasing or acquiring its own shares for the treasury, except in those cases where, depending upon the provisions of the statute and charter provisions, preferred shares upon being acquired by the issuing corporation are ipso facto retired and canceled. The purchase or acquisition of common stock for the treasury is not one of the formal methods provided by law for the reduction of capital."

While the authors above quoted are not the only ones to recognize the need for better methods of accounting for treasury stock, they have been cited because their statements show a continuing demand from 1926 to the present time for a recognition of legal provisions in accounting for treasury stock. Probably the latest development in this direction is the recognition by Professor Kester in the new edition of his second volume of the necessity of reserving surplus equal to the cost of treasury shares acquired.

Does the acquisition of its own stock by a corporation constitute a reduction of capital? Before attempting to answer this question it would seem well to inquire into what is meant by the term "capital." If we mean capital in the broadest sense as synonymous with net worth or total proprietorship, it appears that the return to a stockholder of a part or all of his investment does reduce the capital or net worth of the corporation. But if we mean capital in the more restricted legal sense as represented by the par or stated value of shares issued, and as shown on the balance-sheet under the head of "capital stock," there is ample reason to believe that a different answer must be given.

Capital stock or legal capital in the sense used above is a legal fact, and if the accountant is to set up his statements correctly he must refer to corporation law to determine the legal facts applying to each case. The laws affecting corporations vary widely as between states, and in any individual case the law of the particular state involved will need to be followed, but it is felt that there is enough uniformity in legal theory, statutory law and judicial decisions in this case to warrant certain generalizations.

One of these generalizations is that in most states the acquisition by a corporation of its own stock must not reduce the legal capital, i.e., capital stock of the corporation.

To substantiate this statement, let me quote from a number of state laws.

Section 23 of the Louisiana business corporation act of 1928 states that, "unless the articles otherwise provide, a corporation may purchase its own shares of any class issued by it, but only out of surplus available for dividends." The code of South Dakota contains the rule, in section 8,777, that "a corporation may, out of its surplus funds, by resolution of its stockholders or by their unanimous consent in writing, purchase, hold and transfer shares of its own stock in such manner and for such price as may be by them agreed upon." Section 8 of the Florida corporation act of 1928 contains the provision that ". . . no such corporation shall purchase its own shares of capital stock except from the surplus of its assets over its liabilities including capital." Similar provisions appear in section 3,722 of the code of Tennessee, 1932, and in section 7 of the Arkansas corporation act.

The New York penal code, section 664, contains this provision:

"A director of a stock corporation, who concurs in any vote or act of the directors of such corporation, or any of them, by which it is intended:

. . . . .

5. To apply any portion of the funds of such corporation, except surplus, directly or indirectly, to the purchase of shares of its own stock,

Is guilty of a misdemeanor."

Under subdivision 7 of section 30 of the annotated code of Maryland, 1924, it is provided that "no . . . corporation shall purchase any shares of its own stock unless the assets of the corporation remaining immediately after such purchase shall be not less than the debts of the corporation plus the amount of its issued capital stock." California, Illinois, North Dakota, Ohio and Oklahoma can be added to this list of states holding that, with certain specific exceptions, treasury stock may be acquired only out of surplus. Nine other states—Colorado, Delaware, Indiana, Michigan, Missouri, Nevada, Pennsylvania, Rhode Island, and West Virginia—provide that the purchase of treasury stock must not impair the corporation's capital, which would seem effectively to limit such acquisitions to surplus.

So far we have considered only those states with definite statutory provisions on this subject. But as Professor L. L. Briggs said in an article in the May, 1933, issue of THE JOURNAL OF ACCOUNTANCY, "More than half of our jurisdictions have sketchy and inadequate statutory laws relative to treasury stock, while the legislative enactments of nearly a third of our states and territories contain no reference to this subject." In dealing with corporations chartered in these states it is necessary to study the court decisions to determine the law involved. In this connection we find in *Corpus Juris* the following statement:

"It has been held, as a protection for creditors and non-assenting stockholders, that a purchase of stock to be valid must be made from surplus funds or profits, and this is required in some jurisdictions by statute."

In the Alabama case of *Hall* v. *Henderson* (126 Ala. 449, 1899) the principle was stated that "a corporation having no surplus profits can not purchase shares of its own stock." Percival F.

Brundage reports the Illinois case of *Fraser* v. *Ritchie* (8 Ill. app. 554, 1881) as holding that "the right of the corporation to purchase its own stock is subject to certain restrictions, one of which is that it shall not be done at such time or in such manner as to take away the security upon which the creditors of the corporation have the right to rely for the payment of their claims, or, in other words, so as not to diminish the fund created for their benefit." Judge McSherry said, in a Maryland case:

"If a corporation be incompetent to release subscribers to its capital stock whose subscriptions have not been paid, it is equally without authority to expend the fund represented by the capital stock to purchase shares held by a stockholder who has paid for them."

It is apparent from the citation just made that in most states a corporation may acquire its own stock only out of surplus and must not impair its legal capital thereby. In the states with no statutory provision or compelling judicial decision as a precedent, it is felt that the following arguments would prevail:

1. The par or stated value of all shares of stock issued and not canceled constitutes legal capital.
2. The legal capital of a corporation, according to statutory provisions, can be reduced only in certain specific ways and with the consent of the state (usually by amendment of articles of incorporation).
3. To allow a corporation to reduce its legal capital through the acquisition of its own stock would permit capital reductions outside the provisions of the law.
4. Such permission would amount to blanket authority to the management to return to stockholders any part of, or all, the capital fund, thus leaving the creditors to bear all of the risks of the enterprise.

What does this mean to the accountant? Since treasury stock may be acquired only from surplus, it follows that surplus is reduced by such acquisitions. If surplus is reduced, surely it is the duty of the accountant to show such reduction on the books and in the financial statements. Unless this is done, directors, stockholders and other readers of the balance-sheet will be misled as to the true surplus, and there is always the possibility that directors will incur personal liabilities by declaring dividends out of surplus which has already been used for the acquisition of treasury stock. Such action, resulting in an actual impairment of capital might have the effect of subjecting concurring directors to personal liability. There might also arise some question as to the personal liability of the accountant, who has certified to a surplus, part of which has been used to acquire treasury shares.

A study of this matter has convinced me that accountants are making a grave error in treating treasury stock acquired as either an asset or a deduction from capital stock. In place of these current practices I suggest the following:

1. When treasury stock is purchased, an entry should be made debiting a surplus offset account and crediting the account of the asset given for the stock. For example, if 100 shares of $50 par value stock were acquired for $4,000 an entry would be made as follows:

Surplus applied in acquisition of treasury stock.........	$4,000	
Cash...		$4,000

On the balance-sheet "Surplus applied in acquisition of treasury stock" would be shown as a deduction from the earned-surplus account, while the capital-stock account, representing legal capital would not be affected. Let us assume in the case cited that, prior to the purchase of the 100 shares, there had been 2,500 shares outstanding, issued at an average price of $60 a share, so as to create a capital surplus of $25,000, and that an earned surplus of $30,000 existed. The net-worth section of the balance-sheet after giving effect to the entries above would appear as follows:

Net worth

Capital stock:			
Issued............................	2,500 shares — Par $50		$125,000
In treasury.........................	100 shares		......
Outstanding........................	2,400 shares		$125,000
Capital surplus..................................			25,000
Earned surplus..................................		$30,000	
Less: Surplus applied in acquisition of treasury stock..		4,000	26,000
Total net worth.................................			$176,000

2. When treasury stock is sold, the sales price would be recorded as a debit to cash (or other asset) and a credit to "Surplus applied in acquisition of treasury stock." Any balance remaining in the latter account would then be transferred to either earned or

capital surplus. If the above-mentioned stock were disposed of for $3,800, the proper entries would be:

Cash	$3,800	
Surplus applied in acquisition of treasury stock		$3,800
Surplus	200	
Surplus applied in acquisition of treasury stock		200

This last entry charges surplus with the loss resulting from the purchase and resale of the treasury stock.

If, on the other hand, the stock were sold for more than cost, say $4,500, the $500 excess over cost would represent additional contributed capital and be credited to capital surplus:

Cash	$4,500	
Surplus applied in acquisition of treasury stock		$4,500
Surplus applied in acquisition of treasury stock	500	
Capital surplus		500

3. In the case of donated treasury stock, since the corporation has not parted with anything of value, there is no need for a formal entry. However, a memorandum entry should be made stating the number of shares acquired in this way, and this information should be posted to the explanation column on the debit side of the capital-stock account.

4. When donated treasury stock is sold, the entire proceeds represent contributed capital. The proper credit, therefore, is to capital surplus. To illustrate, assume 400 shares of no-par-value stock donated to a corporation and afterwards sold for $450. The entry for the sale would be:

Cash	$450	
Capital surplus		$450

This seems preferable to the usual method of setting up capital or donated surplus when the stock is donated and adjusting the donated surplus account at the date of resale, since it seems obvious that the new capital comes into the concern at the time the shares are sold and not when they are donated.

One question that might be raised concerning these entries relates to the use of capital surplus in place of earned surplus in recording the purchase of treasury shares. It would seem desirable to determine just what is meant by the term "capital surplus" before going into this question. I think of capital surplus as an excess of contributed capital over legal capital. An illustration or two will make this clear. If a corporation issues $50 par value shares for $55, there arises a capital surplus, or excess of contributed capital over legal capital of $5 for each share issued. If this corporation, through charter amendment, should change its stock to no par, with a stated value of $25 a share, there would again arise a capital surplus, this time of $25 a share. Capital surplus, then, is capital contributed by stockholders in excess of the amount which the law requires the corporation to carry as the fixed or legal capital. From an economic viewpoint it is capital, from a legal viewpoint surplus.

Before considering any legal limitations on the use of capital surplus for the purchase of treasury shares it seems desirable to inquire into the propriety of such transactions. Suppose a corporation without sufficient earned surplus does acquire shares of its own stock out of capital surplus. Does not such a transaction amount to a return to certain stockholders of some of the capital contributed by them and result in a reduction of actual, if not legal, capital? Should the accountant hide behind the lax laws of some of our charter-selling states and contend that because the law allows a corporation which sells its stock at $50 a share to set up a legal capital of $5 or even less per share, that the $45 excess is surplus and not capital and is available for the directors to do with as they please? In spite of most state laws to the contrary, capital surplus as here defined is capital and not surplus; it is principal and not accumulated income and should no more be used for the purchase of treasury stock than should legal capital.

It is probably on the basis of such reasoning that Illinois, California, Minnesota and six other states have placed certain restrictions on the use of capital surplus for the acquisition of treasury shares. The Illinois provision is contained in section 6 of the new business corporation act, passed in 1933, which reads as follows:

"A corporation shall have power to purchase, take, receive, or otherwise acquire, hold, own, pledge, transfer, or otherwise dispose of its own shares, provided that it shall not purchase, either directly or indirectly, its own shares when its net assets are less than the sum of its stated capital, its paid-in surplus, any surplus arising from unrealized appreciation in value or revaluation of its assets and any surplus arising from surrender to the corporation of any of its shares, or when by so doing its net assets would be reduced below such sum."

The California law allows the purchase of treasury shares out of capital surplus for specific purposes only. Under the new Minnesota rule, only preferred shares may be acquired from capital surplus when both common and preferred shares are outstanding; but beyond this there is no restriction on the use of capital surplus for the acquisition of treasury shares. None of these laws was on the statute books at the beginning of 1933. Their enactment seems to indicate a reversal in the trend of corporate law toward a full application of the trust-fund doctrine.

In concluding it would seem well to quote from an actual case as related by an eminent corporation lawyer in the *Accounting Review* for June, 1933:

"In this case a corporation client repurchased a substantial block of common stock from a certain shareholder who was out of sympathy with the business policies of the company. The purchase required the use of funds equivalent to practically all the available surplus. We advised against the purchase because it was apparent that the company was faced with further losses before its business could again show a profit on operations. The president of the company then consulted his accountant, a partner of a well recognized accounting firm, who advised him that the purchase would not affect the surplus item in the company's balance-sheet. Against our advice the purchase was made, and the accounting method which was adopted charged the purchase price, which approximated the original issue price, to capital. Since that time, losses have more than wiped out the real surplus remaining after the purchase. There is today an actual impairment of capital to the extent of approximately $50,000, but the balance-sheet still reflects a fair sized surplus account. The company has an issue of preferred shares entitled to cumulative dividends, and the next step will be that the directors will declare and pay this dividend out of the apparent surplus, whereupon it is not unlikely that they will be called upon to face a charge of personal liability for the declaration and payment of that dividend at a time when the capital was actually impaired. If they should be held liable, then the question will be squarely presented as to whether this firm of accountants can be made to respond in damages."

Accounting for the Dry-Ice Industry

By X. Bender Tansill

Solid carbon dioxide (CO_2), better known as "dry ice," is a most fascinating and interesting chemical. Having a temperature of 109 degrees below zero (Fahrenheit) it is one of the coldest things on earth. It is a product which possesses properties that make it paradoxical in nature. A person may "burn" his hand by holding a piece of it for only a few seconds. The hand is not really burned but is frostbitten. The sensation of such a frostbite is that of burning. When a piece of dry ice is placed in water, the water "boils." It bubbles furiously and vapor with the appearance of steam comes from it. In reality the water does not boil. If you place your finger in it you will find that the water becomes colder instead of warmer. This seething of the water is caused by the rapid disintegration of the dry ice on contact with water. It expands tremendously when it evaporates, the ratio being about 750 cubic feet of gas to one cubic foot of dry ice. This vapor, with the appearance of steam, is caused by the cold carbon dioxide gas striking the air and condensing moisture from the atmosphere. Again, dry ice, as we generally see it, is not an ice; it is carbon dioxide snow compressed together in the form of cubes. These are only a few of the many interesting peculiarities of this product.

Dry ice is the solid state of the gas most of us know as carbonic acid gas—the gas from which soft drinks, ginger ale and soda waters are made. Carbon dioxide is a colorless and practically odorless gas which we exhale from our lungs and is formed whenever any of the common fuels (coke, coal, oil, etc.) burn in oxygen or air. It is present in the open air to the extent of about 3 parts in 10,000. Although this is a relatively small proportion, it is nevertheless a very essential part of our atmosphere, as plant life could not exist without it. It is also one of the heaviest of gases—1.5 times as heavy as air.

Another interesting fact about carbon dioxide is that unlike water it contracts when it freezes. Ice is one-seventh lighter than water, whereas dry ice is nearly twice as heavy as liquid carbon dioxide. This is one of the chemical features of this product that has made it a commercial success.

Due to the extreme cold of dry ice it is difficult to keep it from evaporating. Because of this evaporation, which is technically known as sublimation, there is a real problem in accounting for dry ice after it is produced. This is known as the shrinkage problem and is encountered not only by the producer but also by every user of dry ice. There is another loss between the amount of carbon dioxide gas consumed in the manufacture of dry ice and the amount of dry ice produced, but as this loss comes wholly in the manufacture of the product it is not to be confused with shrinkage of dry ice after it is produced.

To present a picture of the whole cycle of the manufacture of dry ice, a brief description of the salient features in making and handling of this product follows:

Raw carbon dioxide gas used in the manufacture of dry ice may be obtained in a number of ways, some of which are the following:

- (a) From the fermentation of molasses or corn in the manufacture of alcohol.
- (b) From the burning of coke.
- (c) From the manufacture of lime, soda ash, etc.
- (d) From the manufacture of carborundum.
- (e) From the decomposition of vegetable matter.

After the raw carbon dioxide gas is produced or procured it is usually stored in a large gas-holder similar to the gas-holders used by the manufacturers of illuminating gas. From this gas-holder it is drawn as needed in the production of dry ice, through a series of tanks containing carbon, water and sulphuric acid, which are known as purifiers. All or practically all of the impurities in the gas are removed by this process and it is then drawn into huge compressors where it is compressed through several stages to a pressure of from 900 to 1,200 pounds. Because of the terrific heat generated in the gas in subjecting it to this pressure, it must be cooled, at intervals, in the process. This is done by passing cold water, as well as cold carbon dioxide gas, around in the jackets surrounding the pipes that hold the hot carbon dioxide gas. After the compressed gas has been sufficiently cooled it becomes a liquid and is then allowed to pass into a very strong steel compartment in which it is flashed down to atmospheric pressure. The carbon dioxide in dropping down from a pressure of 900 pounds or more to atmospheric pressure partly turns to carbon dioxide snow and the remainder flashes back into a very cold gas. This cold gas is re-introduced into the manufacturing cycle and further helps to cool the other carbon dioxide gas made hot by compression.

The carbon dioxide snow which was made in the steel compartment mentioned above, known as a snow machine or converter, is generally hydraulically compressed into cakes of approximately one cubic foot in size. The compressed cake after being ejected from the snow machine is wrapped in kraft wrapping paper and stored in storage boxes, refrigerator cars, silos, or other specially prepared places, where it will not sublime (shrink) too rapidly, there to await shipment and sale.

From the instant dry ice is made until it is sold it shrinks in weight. Accordingly the amount of shrinkage must be carefully ascertained and recorded. To accomplish this each cake or block of dry ice is weighed as soon as it is produced and a record is made of the weight. This record is known as the production record and is the basis of all the cost calculations. As shipments are made from the factory a record is made of the weight and number of cakes of dry ice in each shipment. A continuous inventory is kept at the factory and at all storage points and warehouses in both number of cakes of dry ice and in pounds. This is necessary as, in order to ascertain the daily shrinkage, physical inventories have to be taken at the end of each day in both number of cakes and pounds. These inventories are compared with book inventories to ascertain the amount of shrinkage in weight. Inventories in number of cakes are taken and kept daily in order to guard against theft.

The above description of the more important features of the product "dry ice" and its manufacture has been presented in order that the accounting methods set forth below may be more thoroughly understood.

In determining the cost to produce dry ice the principal steps in the manufacturing process have been chosen as costing points. These costing points or steps, in general, are:

Cost to:

(a) Manufacture raw carbon dioxide gas.
(b) Purify the raw carbon dioxide gas.
(c) Liquefy the purified carbon dioxide gas.
(d) Solidify the liquefied carbon dioxide.
(e) Pack and store the manufactured dry ice.

There is another costing point to be considered, *i. e.*, the cost to distribute or ship dry ice. This cost, however, must be considered separately as it is not a part of the production or manufacturing cost.

In those instances where raw carbon dioxide gas is a by-product of some other manufacturing process, as in the manufacture of alcohol, caustic soda, etc., the cost assignable to step (a) would be the purchase price of the raw carbon dioxide gas. If the transaction is an intercompany one, the cost to be used would be the amount apportioned to the by-product (carbon dioxide gas) from the principal product manufactured.

In some cases carbon dioxide is bottled and sold in the liquid form as well as in the form of dry ice. When this procedure is followed another costing point, known as the cost to bottle liquid carbon dioxide, is added to the above mentioned steps.

Each one of these steps is clearly defined in the manufacturing process. This is evidenced by the different types of machinery used in each of the steps in the manufacturing process. For instance, in the purification process the machinery through which this part of the manufacturing cycle is accomplished has a definite location and is attended to by a definite type of labor. The liquefaction process is accomplished by huge compressors, condensors and heat exchangers which have a definite location in the plant and are also attended to by a specific type of labor, and so on. Therefore it is quite a simple matter to assign the material and labor as well as the overhead costs to each step.

A comparison of the processes of manufacturing water ice and dry ice discloses certain accounting similarities.

In the manufacture and distribution of water ice the main cost classifications are:

(a) Engine-room expense.
(b) Tank-room expense.
(c) Storage expense.
(d) Distribution expense.

The engine-room expense in the water ice industry is comparable to the cost to liquefy carbon dioxide in the dry ice industry. These processes are similar because in each they have a common ground, compression. Compressors are required in the water ice industry in order to compress and re-compress the ammonia. When the ammonia is permitted to expand in the coils in and surrounding the brine tanks, it absorbs heat from the brine, which in turn absorbs heat from the freezing tanks, thereby allowing the water contained in the latter to solidify into ice.

In the dry ice industry compressors are necessary in order to compress the carbon dioxide gas into liquid carbon dioxide. When this liquid is allowed to expand it forms a solid: carbon dioxide snow.

Tank-room expense in the manufacture of water ice closely resembles the cost to solidify carbon dioxide in the manufacture of dry ice. Water is changed into water ice in this process and likewise carbon dioxide is changed to dry ice.

The expenses making up the storage expense and distribution expense in the cost to manufacture and distribute water ice are practically the same as those making up the cost to pack and store dry ice and cost to distribute or ship dry ice in the latter industry.

As stated above, the basic record in the manufacture of dry ice is the production record. As each cake or block of dry ice is ejected from the converter, or snow machine, where it is manufactured, it is weighed, and its weight is recorded on the production record. At the end of each hour the total number of cakes and the total weight of dry ice manufactured during that time are computed, and a record thereof is turned into the factory office. This information, besides being a basic record, serves to inform the plant manager and others charged with the operation of the plant whether or not the machinery is operating up to its proper efficiency. Any number of things, such as a freeze-up in the pipe lines, leaks in the CO_2 gas line, etc., etc., may be taking place and cause a drop in the efficiency of the operation as well as a reduction in the amount of the manufactured product.

After the dry ice is weighed, it is wrapped in kraft paper. This is done not only to facilitate its handling but also to help insulate it from the outside atmosphere and retard as much as possible its evaporation, or sublimation.

The dry ice wrapped in kraft paper is then placed in storage to await shipment. It is sometimes stored in large, heavily insulated storage boxes or it may be placed in refrigerator cars, automobile trucks or in large storage bins known in the industry as silos.

When the product is withdrawn from storage to be shipped or when a refrigerator car or automobile truck, in which it has been stored, is dispatched to a warehouse, a record is made of the weight of the product, in order that the amount of shrinkage in storage at the plant may be computed. This record also serves as a base in determining the shrinkage of the product in transit.

As the dry ice is generally shipped to a warehouse in another part of the country, in order to establish records at that warehouse the weight of the product on arrival must be ascertained. From this record not only is it possible to find the shrinkage en route but it also serves the purpose of establishing the weight (and also the number of cakes) for which the warehouse is to account.

When the product is shipped from the plant a shipping ticket is made out and the weight is inserted thereon. This shipping ticket is made up in triplicate. The original is sent with the shipment, the duplicate is forwarded to the home office and the triplicate is retained at the factory. The weight of the shipment and number of cakes shipped are inserted upon the duplicate and the triplicate copies but omitted from the original. This is done so that the warehouseman will be compelled to weigh and count the cakes of dry ice upon their arrival at the warehouse. The warehouseman enters the number of his count, as well as the weight upon arrival, on the original shipping ticket and then forwards it to the main office where it is compared with the duplicate to see that the figures as to number of cakes, etc., correspond. This is an important safeguard against theft.

A continuous inventory of dry ice on hand is kept at the plant as well as at each warehouse. Each day a statement is forwarded from these places showing the number of cakes and weight of product on hand at end of preceding day; number and weight of product produced at plant or received at warehouse that day; the shipments and / or sales for that day, together with the actual inventory at the end of the day. The balancing figure in this statement is the shrinkage in weight for the day. Any shrinkage in number of cakes requires a satisfactory explanation upon the back of the statement by the person in charge at the place in question.

This statement is known as the shrinkage report and the data contained therein are checked, reconciled and posted daily to the shrinkage ledger. At the end of each month shrinkage percentages are computed and compared with previous results. In this way fairly accurate standard percentages are computed. These standards are helpful in guarding against theft.

There are many instances where special handling of the accounting records are required. However the treatment of these cases will present itself as the occasions arise.

Punched-Card Method in Accounting

BY RAYMOND V. CRADIT

Field studies of tabulating machine installations show that the punched-card method can be applied to a great number of statistical and accounting operations. A study as to whether this method should be used as against hand or other machine methods brings to light certain variables which are fundamental in reaching a decision as to the benefits to be derived.

The number of media, number of items, number of classifications, number of classes in each classification, and the number of active classes in each classification have an effect on volume. Without sufficient volume it is difficult to justify the punched-card method except for purely sentimental reasons.

Volume, the reduction in time for the preparation of reports, the subsequent use of the punched card, the legal necessity for maintaining records for a certain period of time, the percentage of allowable error, unused capacity and the question of capitalization of equipment as against the renting of equipment—all these are related to costs. The punched-card method must justify itself either by reducing costs or by providing better methods of control at increased costs. In the latter case the management assumes these additional costs because it believes that the punched-card method can accomplish the end sought better than any other method.

The use of a tabulating service company may or may not be a factor in the installation of punched-card equipment. As a means of testing the probable results of the punched-card method as applied to specific accounting functions in specific industries it can be of considerable value, and the probable effects of a tabulating-machine installation upon costs, methods of control and organization, to some extent, can be pre-determined. In other cases the assistance of the tabulating service company may be a motivating factor in inducing the adoption of the punched-card method without the installation of the equipment. In this instance certain risks are eliminated but at the same time others are incurred.

In the discussion to follow an attempt has been made to look at each factor or variable as though it were isolated from any or all of the others. In a large measure this is impossible. Costs are a result dependent upon one, all or a combination of the factors. One factor is or may be inter-related to another factor or combination of factors, and these inter-relations vary in degree with the kind of business and the kind of accounting function which is applied.

It is believed, however, that the following analysis of the factors motivating the installation of the punched-card method may indicate the advantages and disadvantages encountered in its application to statistical and accounting functions.

As used with the punched-card method, media may be considered as the original records of information, either primary or secondary, which are used as a basis for transcribing the data by means of punched holes in the card.

The number of media used in the accounting operations may have a decided bearing upon the question under review, because it is tied up with the volume factor. It would be difficult to conceive of a situation where punched-card equipment would be economical if there were only one hundred media a day to be used. A hand-sort of these media into a dozen or more classifications could easily be made and the information recorded for each of these classifications by hand. It is not probable that there would be so great a number of items in each medium that such a situation as outlined would call for a machine of any kind. Nor is it probable that the number of accounting operations in such a case would call for anything but a very simple machine.

The fact that the punched card may serve as both primary and secondary media is a factor which would not be overlooked. The information to be punched in the card is written upon the face of the card and from this key punching takes place. This procedure is especially applicable to payroll, job costs and physical inventory.

If the original media are bulky and can be destroyed once the data are placed on the card this may constitute an argument for the use of the punched-card method. It is to be observed, however, that if this is done other departments wishing to abstract material later must look to the tabulating department for information. If the original media are not destroyed they may be returned to the originating department and filed.

The extent to which media may exist automatically, or may be created as a by-product, and the possibility of these media being arranged in proper groups by some previous operation, thus enabling the clerk to summarize the data without additional labor may lessen the benefits to be derived from the punched-card method. For example, a posting of the sales invoices to accounts receivable on a geographical basis gives an automatic grouping of sales invoices by salesmen or territory.

Items per medium become important according to their nature, size and number.

If the items in the media are in terms of both quantity and quality—for example, commodity and value—the information may be tabulated in one operation.

To obtain this information other than by the punched-card method requires several sortings which might easily become laborious by the hand-sort method if there were a large number of items.

As to the number of items, it is sufficient to say that if there is only one item on the media, the media may be hand-sorted and if there is more than one item the media may be arranged by the exhaust method. Even this latter method has its limitations because it does not seem likely that the exhaust method would work to an advantage where there were more than three different kind of items per medium. It is obvious that the breakdown of these items into different classes is the important thing. Concerning the number of items necessary to justify the use of the punched-card method, C. Eichenauer says:

> "In general, one will be able to say that the limitation is around 1,500 accounting operations or items a day. But this figure alone is not decisive, for it depends very much on how often the various items can be utilized according to the reports to be prepared. A factory with one or more products and employing 1,000 men will have only a few operations a day, if there are only a few reports concerning costs. However, these are likely to be much more numerous in another factory with the same number of men if a variety of products are being manufactured. Most accounting operations occur, in our experience, where a number of similarly constructed articles are produced, since in regard to specific calculation and price each series of articles turned out needs special attention as to cost and sales price."

He is speaking primarily about job-cost analysis, but in any case the advantage of the punched-card method depends to a large extent upon how often and in what way the items are to be utilized in the preparation of records and reports.

The main reason why the punched-card method is particularly suited to the census and vital statistics is because of the large number of classifications. There will probably be a large number of classifications in any statistical compilation, but it does not follow that this will be the case in accounting operations. How many classifications are necessary in the accounting routine to justify the use of the punched-card method is a moot question, but Floyd H. Rowland lays down the following dictum:

"One of the first cardinal principles to be kept in mind is that it is practically never economical to use a punched card which is only going to be sorted once or twice for report purposes, that is to say, where practically only one distribution is made."

This statement is predicated on the theory that when only one distribution is made the media are handled once only and the use of the punched-card method could not facilitate this handling.

In department-store accounting the sales audit requires only a few groupings, and quite often these are merely sub-divisions of one main grouping. Totals by salesmen can be made to yield totals by departments. A two-way classification here may be no reason whatever for saying that the work should be done by the punched-card method. Perhaps a three-way distribution or classification would not indicate any particular advantage because of the limited application of the punched-card method in other accounting functions of the department store.

The punched-card method, however, does provide for a centralization of records under the minimum requirements of a two-way classification and this is considered by many as a distinct advantage.

Willard J. Graham summarizes the classification controversy thus:

"The number of classifications and sub-classifications causes more variance of opinion in the selection of a method and a machine than any other. The punched-card tabulating men have a dictum something like this: 'When we find three or more clerks putting the same information in two or more places, we investigate for punched cards.' It is probable that the situation described represents the absolute minimum for such equipment, and some would place it much higher. It is easy to be misled at this point by disregarding the possibility of combination methods that produce two or more classifications at one operation. Frequently, too, the totals on one run can be used for a classification on a second basis without a rehandling of the media. Often one medium may be distributed by a hand-sort method. The development of short cuts and summary methods often materially reduces the apparent requirements for multi-handling of distribution media."[1]

In the following comments "classes" refer to accounts and "items" refer to postings.

As has been intimated in the discussion of the number of classifications, the punched-card method is especially suited to the handling of a large number of classes or sub-classes coming under different classifications. By the application of the punched-card method the handling of the original media more than once is eliminated. Furthermore, the number of counters on the tabulator affords greater capacity to handle more classes of data under different classifications than does any other machine method. Hence, difficulties due to lack of capacity are eliminated and at some point where a sufficient number of classes is used the punched-card method becomes more economical than any other method. Where this point exists must be determined by experiment.

Comparisons of the capacities of the different machines may serve as a guide to some extent, but the limitations of machines when further expansion is required must be given some weight in considering the costs. In the case of punched-card equipment there is always the possibility of reducing the size of the tabulator from a seven-bank machine to a five-bank or from a five-bank to a four-bank when it is found that the number of classes does not justify the rental expense of the larger units. In other words, it is easier to cut down the size of the tabulator when the number of classes is reduced than it is to adapt other machines to an expansion in the number of classes.

The number of active classes as contrasted with the number of inactive classes deserves attention when trying to determine the probable benefits of the punched-card method. If, for example, there are one thousand accounts and ninety per cent of these fall into ten classifications, there are machines capable of handling the nine hundred accounts, placing them in their respective categories and distributing the remaining one hundred accounts through the utilization of a miscellaneous register. When, however, the number of accounts increases to ten thousand or to one hundred

[1] Willard J. Graham, "Distribution Methods—By Hand and By Machine," THE JOURNAL OF ACCOUNTANCY, March, 1932, p. 180.

thousand it is obvious that a miscellaneous register does not work to an advantage.

With punched-card equipment it is easy to get into the habit of requiring too many different classes and sub-classes. Sometimes this is done to justify the equipment rental, but the use to which these reports are put for control purposes certainly would not, in many cases, justify the amount spent for the equipment.

What is true regarding useless classes is also true in respect to the number of items or postings in each class. A number of classes with few items in each at once raises the suspicion that a lot of information is being presented which is of doubtful value. Scientific management has yet to progress a long way before it can make use of the data provided by making a few postings to a large number of accounts.

Executives seem to be agreed that volume is one of the most important if not the most important factor to be considered in deciding whether or not it will be economical to use the punched-card method. But these executives are not always in accord as to what constitutes volume. That there is a lot of work to be done affords no criterion for measuring volume. From the foregoing discussion it should be sufficiently clear that volume results not so much from a mass of data as from the manner in which these data are distributed or classified.

Volume is directly related to costs. The greater the volume up to maximum unit machine capacity the more thinly spread will be the overhead which in turn reduces the cost for each accounting operation.

In order to determine the available volume it is necessary to look at each accounting function that will be recorded on the machine. A man who has had considerable experience in the installation of punched-card equipment states that a concern employing five hundred workers with an average of four jobs a day, and using one thousand material requisitions a day has sufficient volume to justify punched-card equipment. It is assumed that the equipment used in a concern such as this will provide for job costs, a daily closing of the jobs, a credit to stores, and a complete payroll.

Concerning volume Eichenauer says:

"We thus arrive at the conclusion that even relatively small concerns with less than one thousand employees—where an intricate accounting system is employed—can use to an advantage tabulating equipment, assisted by a combination of other kinds of machines. Larger enterprises, with one product only—for example, coal mines—that have less requirements for accounting, will not derive through the introduction of our system a large advantage."

One of the chief arguments of the protagonists of the punched-card method is that, assuming a minimum volume to justify the installation, the preparation and facilitation of records for executive control are speeded up to a greater extent than by any other method.

The chief cost accountant of the Republic Steel Corporation makes this statement relative to speeding up through tabulating equipment:

"Cost analyzing by the operating department has been advanced about two weeks over our previous closing time, which naturally brings to the attention of all concerned any inefficiencies which may exist, thereby materially benefiting their current month's costs. Inventory of raw materials, supplies, process and finished products is available currently and for early analysis by the early closing method. . . . Early closing has automatically advanced our final billing for the month from three to four days. Final invoicing for the month is being accomplished on the morning of the first day of the succeeding month. . . . This also advances the sending of statements to customers to the extent of three to four days, and recognizing the volume of billing involved, from a dollar and cents standpoint, we get a corresponding improvement in our collections to the extent of two to three days."

While Mr. Knuff gives due credit to the punched-card method for its part in enabling an early closing to be effected, he also lists sixteen other factors which play a part in bringing about an early closing.

He gives support to my contentions regarding certain observed phenomena in punched-card installations which are responsible for speed and an early preparation of reports, apart from the mechanical equipment itself. These are:

1. The use of punched-card equipment requires better coordination of the accounting functions and results in a better scheduling of media from one department or several departments to the tabulating department.
2. The fact that the tabulating company frequently furnishes a system man with the installation who devotes his entire

time for a considerable period results in securing efficient operation of the method.

3. Work is speeded up because of specialized labor for both the punched-card equipment and other machines used in conjunction with this equipment.
4. Tedious and slow hand work is eliminated through the use of printed forms and vouchers.
5. Peak loads are eliminated by transferring non-essential assistants from one department to another, including the tabulating department.

In a mail order concern tabulating equipment was installed for inventory control. This, used with "trend buying," which is predicated upon a mathematical formula based on the average performance of a class of items instead of the individual performance of each item, enabled the inventory to be handled five to six days ahead of the previous year's schedule. Under the previous plan it had always been necessary to devote from ten to fourteen days after the inventory was taken to complete the inventory counts on the stock-record books and to determine requirements. With the punched-card method as soon as the cards were used for inventory they were used for running the stock-record sheets.

Eichenauer shows that the following time-saving resulted in preparing reports, based upon the wages of one hundred men, when the punched-card method was used with adding machines:

1. The monthly payroll department showed a saving of eight working days. Twelve working days previously required were reduced to four working days.
2. The cost department showed a saving of seven working days. Eleven working days previously required were reduced to four working days.
3. The combined saving of fifteen working days was based on settlements every ten days.
4. The time for work to be done in the accounting department, however, remained the same.

The subsequent use of the punched cards following their utilization for daily and monthly records and reports is a factor worthy of more emphasis than is usually given it. Merely to say that "the cards are filed for further analysis" is insufficient. The probabilities as to what will constitute this "further analysis," its effect upon costs and the actual value of these subsequent reports must be known. One should never become so enthusiastic over the punched-card method that it might be said as was said of one executive: "He would use it (punched-card equipment) to wash windows if possible."

In spite of the alleged misuse of the punched-card method, it is less probable that subsequent information of little value will be abstracted, than that a multiplicity of reports in the routine operations will be obtained. This is because in routine accounting operations it is easy to draw off information otherwise not obtained without an excessive number of sortings or without a complete re-plugging of the machine. Subsequent reports may call for a grouping of the cards in such a way as to require a large number of sortings and either a new arrangement of the plug board or a new multiple translator.

Furthermore, subsequent use of the cards depends upon their availability. This means that they must be stored near at hand. Once the cards have been placed in the dead file, they may be moved to less expensive storage quarters. Only a real need for their use will justify their being kept in the tabulating department.

In installations where punched-card equipment is being applied to accounts receivable, the cards are subsequently used to prepare a history of customers' accounts and to abstract a detail aged trial balance. The first of these reports gives the relative activity or inactivity of the customers' accounts as well as the amount of the merchandise purchased, the amount paid and the amount due. The second report makes it possible to determine the age of the different items in the customer's account by 90-, 60-, and 30-day periods.

What may be a subsequent use of punched cards for one firm may be a current use of the cards for another. This is often true in case of sales analyses. In sales accounting the punched cards may be used primarily for a sales item register, a tabulation of orders for production control, a tabulation of invoices, a tabulation of back orders and a tabulation for perpetual inventory control. Or the cards may be used primarily for a combination of these reports. It is, therefore, probable in most cases that the sales analysis made at the close of the month—or at any time, for that matter—is in effect a subsequent use of the punched cards, because reports are obtained that would not be obtained in many instances with other machine methods.

In considering subsequent use of cards as a factor in determining the installation of the punched-card method the accountant should not overlook the field of cost accounting. By regrouping the cards, after use for daily and monthly reports, it is possible to obtain important cost data.

It should be stated that, inasmuch as the punched card is the most expensive original medium used in any accounting method, the economies of the method should be based upon regular accounting operations. If such economies are established the fact that subsequent reports may be obtained as a by-product may cause the punched-card method to be preferred.

Granting the legal necessity for maintaining records or reports or media for a given period of time, the advantage accruing from the punched-card method must be determined by how readily the information may be abstracted and by the comparative cost of abstracting such information by other machine methods. The fact that such information can be obtained by mechanical means when the punched cards are already available does offer an argument in favor of the punched-card method, and it is a factor which will be weighted according to the amount of information required by the regulatory bodies and the frequency of the calls for such information. The contention that punched cards are bulky and require considerable storage space may be offset by the fact that the card serves as original, thus permitting the records from which the information was transcribed to be discarded.

Even though the punched-card method utilizes equipment which is highly automatic, errors are made. These errors occur most frequently in key punching. Some of them are due to the operator's inability to read the data on the original media. In other cases the data are properly read but improperly transcribed. If the fault is inherent in the operator, then, of course, the same kind of errors would probably be made regardless of what kind of machines were used in transcribing data from the original media to other instruments.

But it must be admitted at the outset that the punched-card method does involve some peculiar conditions in transcription which are present to a less degree, if at all, in other machine methods. One of the fundamental principles underlying the whole punched-card method is that commodities, states, cities, names, accounts, departments, and what not, may be reduced to a code and by the use of a few figures be described upon the card. It is by means of this coding principle that cards can be sorted and resorted expeditiously into any desired groupings and the results can be tabulated.

Certain safeguards are designed to eliminate and to catch errors in coding. Standardized codes as simple and practical as can be devised are available. These are made up for states, counties, and all cities of two thousand, five hundred minimum population in the United States. The elimination of auxiliary codes, making use of a letter arrangement, and the issuance of charts of accounts, commodities, workers, etc., and the appropriate uniform code help to place coding on a practical basis.

On the mechanical side, there is always the possibility of checking the code or other data taken from the original media by use of the verifying punch. This is an expensive and time-consuming task in any case, because it is a repetition of the punching process. As an alternative one may group the cards and run a steel needle through the punched holes designating the code or may print the punched information at the top of the cards by running them through the interpreter.

Concerning the degree of error allowable in distribution methods Professor Graham says:

"All methods of proof involve some type of repeated effort and therefore cost money. Some proofs are more accurate than others—and cost more money. Increased accuracy of information usually means increased value, but not always. Frequently approximations can be obtained at much less cost than proof-to-the-cent accuracy and may serve the purpose as satisfactorily. It is difficult in any given case to draw the line at which increased accuracy ceases to be worth its cost."

No one seems to know how expensive are methods of proof, nor what is the percentage of allowable error, nor what percentage of errors occur when the punched-card method is used as contrasted with other machine methods doing exactly the same kind of work.

In the tabulation of the census and in other large statistical compilations it is probably safe to say that were not tabulating equipment used the errors would be so great that the published statistics would be of little value. Obviously, in these instances units are being dealt with as such, not in terms of dollar value, and consequently the allowable percentage of error would be higher than in regular accounting operations.

In all punched-card installations there will be some unused capacity. This may be on the part of the working force or on the part of the machines. Whether this is important or not depends on the amount of unused capacity.

Time losses must occur. For example, the tabulator presumedly operates at the capacity of one hundred and fifty cards a minute. On the basis of an eight-hour day, theoretically, seventy-two thousand cards will be tabulated, assuming maximum efficiency. It is also assumed that the operator will spend every second at the machine and that the tabulation is of mass material.

But even though the operator did spend every second at the machine there would still be time losses. In the first place, five hundred cards at a time constitute an efficient feeding. This requires an average of five seconds. On the basis of one hundred and forty-four feedings a day the time lost is twelve minutes. The theoretical output is reduced .25 per cent or one thousand, eight hundred cards, bringing the total down to seventy thousand, two hundred cards a day.

If this were all the time that was lost the consideration of unused capacity could be passed over without further comment. But there is unused capacity resulting from the servicing of the machine. Servicing requires time—considerable time—especially for the tabulator.

In the third place, some time is lost on account of card jams. These jams occur usually on the tabulator and the sorter, because cards which have been frequently handled are used. New cards are fed into the key punch without difficulty. The time lost by card jams results not so much from the extracting of the cards but from the possibility that new cards will have to be made.

In the fourth place, unless the tabulator uses a multiple translator, time is lost in plugging the machine. How much time is thus lost naturally depends upon what rearrangements are necessary to prepare different daily and different monthly reports. Monthly reports may require an almost complete rearrangement of the plug board. Efficiency can be obtained by setting up plug charts for the different applications. Strange to say these charts are not always utilized.

In the fifth place, there is some unused capacity because all tabulating machines do not tabulate at the claimed rate of 150 cards a minute nor list at the rate of 75 cards a minute. Undoubtedly all punched-card equipment could be driven at the advertised speeds, but there is a feeling that it is better to have the machines running too slowly than too fast.

A study of the unused capacity on the tabulator as compared to the operator's total time, and the unused capacity on the sorter as compared to the total tabulating hours, for a period of one month in a small installation, showed that the tabulator was utilized 77.53 per cent of the operator's total time and the sorter was utilized 16.88 per cent of the tabulator time. It is not claimed that any accurate generalizations can be made from this study.

To make the cost schedules for different machine installations comparable it is necessary to reduce each one to a basis of present worth, through an adaptation of "compound interest" formulas.

For the punched-card installation it is assumed that four pieces of equipment are necessary, entailing a monthly rental of \$288.50, payable in advance. It is also arbitrarily assumed that the equipment is to be capitalized at six per cent for 96 months.

To determine the amount of money to be set aside now to pay the monthly rental for 96 months it is necessary to solve the following:

$$
\begin{aligned}
\text{P. W.} &= 288.50 \div \left(\frac{288.50}{R\text{-}1} - \frac{\left(\frac{288.50}{R\text{-}1}\right)}{(R)95} \right) \\
&= 288.50 \div \left(\frac{288.50}{.005} - \frac{\left(\frac{288.50}{.005}\right)}{(1.005)95} \right) \\
&= 288.50 \div \left(57{,}700 - \frac{57{,}700}{1.60611215} \right) \\
&= 288.50 \div (57{,}700 - 35{,}925) \\
&= \$22{,}063.50
\end{aligned}
$$

R-1 is found by dividing the interest rate, .06 by 12 (the number of months) and R to the 95th power is found by referring to compound-interest tables.

The complexity of punched-card equipment and the required fineness of adjustment calls for an available force of skilled mechanics capable of keeping the machines in perfect order. A sufficient force of mechanics must be maintained to carry on periodic inspections and to make the necessary adjustments.

Obviously, only the company furnishing the equipment can assume the responsibility of providing such service, and it is essential that a certain portion of the rental price include the cost of the service. The exact amount which should be charged to the various machines is not known, but for purposes of illustration it is assumed to be one-half the monthly rental charge for each machine.

Using the same formula as above but substituting \$144.25 for \$288.50, \$11,031.75 is found to be the amount which if set aside now and compounded at the monthly rate of .005 each month will provide 96 rentals of \$144.25 each. When the last payment is made the fund will be exhausted.

The sums of money required for the machine rentals may be compared to the amounts required when machines are purchased outright. Let us assume that \$10,000 worth of calculating and bookkeeping machines is purchased, and that after eight years all will be discarded. The estimated scrap or trade-in value at that time is estimated to be \$1,000. The present-worth formula is:

$$\begin{aligned}
\text{P. W.} &= 10{,}000 - \left(\frac{1{,}000}{(R)8}\right) \\
&= 10{,}000 - \left(\frac{1{,}000}{1.59384807}\right) \\
&= 10{,}000 - (627.41) \\
&= \$9{,}372.59
\end{aligned}$$

Clerk hire, supplies and other direct expenses for each installation under consideration should also be reduced to a basis of present worth in order to make all costs comparable.

By giving proper weight to the factors here discussed the comptroller may reach a decision as to whether or not his accounting routine is favorable for the application of the punched-card method. One factor may be given great weight in one case and very little weight in another. Circumstances must be considered.

There are times when the evidence is overwhelmingly in favor of punched-card equipment, and there are other times when it is overwhelmingly in favor of other machine or hand methods. In some cases the evidence accumulated affords no basis for making an intelligent selection of equipment. It is in these cases that experiments must be made before it can be said that there is one "best" method.

Students' Department

H. P. Baumann, *Editor*

AMERICAN INSTITUTE EXAMINATIONS

[Note.—The fact that these answers appear in The Journal of Accountancy should not cause the reader to assume that they are the official answers of the board of examiners. They represent merely the opinions of the editor of the *Students' Department.*]

Examination in Accounting Theory and Practice—Part II

November 17, 1933, 1:30 P.M. to 6:30 P.M.

Answer problems 1, 2, 3 and 4 and two of the problems 5, 6 and 7.

No. 2 (30 points):

You are appointed by the board of directors to examine the accounts relating to the assets and liabilities of The Goodenough Corporation, New York, and its domestic subsidiaries, as at December 31, 1932.

Prepare a consolidated balance-sheet as at December 31, 1932.

The Goodenough Corporation has one foreign subsidiary (wholly owned), the accounts of which have been examined by another firm of accountants whose report, which has been submitted to you, is as follows:

The British Goodenough Company, Ltd.

Balance-sheet as at December 31, 1932

Liabilities

Share capital:		
Authorized:		
600,000 shares of £1 each	£600,000	
Issued:		
600,000 shares of £1 each		£600,000
Current trade liabilities		78,500
Reserve for income tax payable:		
Due January 1, 1933		90,000
Due January 1, 1934		74,500
Indebtedness to affiliated company		2,500
Profit-and-loss appropriation account:		
Balance January 1, 1932	£ 12,145	
Net profit for year	298,000	
	£310,145	
Less: dividends	200,000	110,145
Total		£955,645

Note.—There is a liability not included in this balance-sheet in respect to machinery which this company has agreed to purchase.

Assets

Property, plant and equipment at cost, less reserve of £250,000 for depreciation	£450,000
Stock on hand at cost	170,000
Customers' accounts receivable, less reserve of £10,000 for bad and doubtful accounts	250,383

Cash at bank and in hand (Of this amount the sum of £80,000 is earmarked for a guarantee given on behalf of the company)	£85,262
Total	£955,645

Auditor's report

We report to the members that we have examined the above balance-sheet with the books of the company and have obtained all the information and explanation we have required. We are not satisfied as to the adequacy of the reserve for bad and doubtful accounts.

Subject to this remark we are of opinion that the balance-sheet is properly drawn up so as to exhibit a true and correct view of the state of the company's affairs as at December 31, 1932, according to the best of our information and explanations given to us, and as shown by the books of the company.

A. B. C. AND Co.

London, England
January 31, 1933

You have communicated with the English company and with its auditors and have ascertained the following:

(a) With the exception of machinery costing £100,000, which was installed in November, 1932, when the average rate of exchange was \$3.50, the property, plant and equipment were acquired when the company was formed, when the rate of exchange was at par (\$4.86). The established policy of the company is to charge a full year's depreciation on additions made in the first six months of any year and to charge depreciation commencing January 1st of the year following the year of addition on additions made in the second six months of any year.

(b) Of the stock on hand £160,000 represents goods purchased from The Goodenough Corporation, the parent company, at its cost of \$540,000 plus freight to England of \$36,000 paid by the parent company at the time of shipment. Cost of the remaining £10,000 of British stock approximated market at December 31, 1932. (Note: There had been no change in freight rates to December 31, 1932, and the rate of exchange on that date was \$3.40. You find that The Goodenough Corporation had reduced the cost of its inventory by 10% in order to reflect the lower of cost or market value as at December 31, 1932. The directors have agreed that for the purpose of the consolidated balance-sheet the inventory as a whole should be valued at the lower of cost or market value.)

(c) The auditors of The British Goodenough Company, Ltd. feel that an additional reserve of £50,000 should be provided against the accounts receivable. Neither the directors of the British company nor those of the American corporation can agree that any further reserve is necessary.

(d) The note on the British balance-sheet refers to machinery which it has been agreed shall be purchased from the parent company at its cost less depreciation—net \$120,000.

As a result of your examination of the accounts of The Goodenough Corporation and its domestic subsidiaries, you have prepared the following consolidated trial balance as at December 31, 1932, together with your list of audit notes:

Consolidated trial balance as at December 31, 1932

	DR.	CR.
Cash in banks and on hand	\$ 880,000	
U. S. government securities	504,000	
Accounts receivable	1,910,000	
Reserve for doubtful accounts		210,000
Inventories	1,325,000	
Property, plant and equipment	6,600,000	
Reserve for depreciation		2,500,000
Company's own shares	275,000	
Due from The British Goodenough Company, Ltd.	10,000	

	DR.	CR.
Accounts payable and accrued liabilities.........		$2,320,000
Provision for federal income tax................		275,000
Dividend of 50 cents a share payable Jan. 2, 1933		500,000
Capital stock—common, no par, authorized and issued...................................		5,000,000
Surplus...................................		3,615,000
Investment in subsidiary company at cost.......	$ 2,916,000	
	$14,420,000	$14,420,000

Audit notes

(1) Cash includes a special deposit of $100,000 in the Y Bank & Trust Company. This deposit is subordinate to claims of all other depositors but not to claims of stockholders.

(2) The government securities are stated at cost, although the market value at December 31, 1932, was only $490,000. However, on February 28, 1933, the market value had recovered to $507,000.

(3) The inter-company account is debited or credited at the actual rate of exchange on the date of each transaction, but the balance at the end of each month is adjusted on the books of the parent company by a debit or credit to profit-and-loss account, to bring the account to the basis of a fixed rate of exchange, viz., $4. The actual dollar cost of the £2,500 shown on the British company's balance-sheet was $9,250. There were no items in transit.

(4) In addition to customers' accounts the following items are included in accounts receivable:

(a) Loan to officer $87,000.

(b) Customers' accounts aggregating $370,000, on which payments are deferred by special arrangement until 1934: $50,000 of reserve is allotted to these accounts.

(5) Company's own shares represent 7,000 shares carried at cost and held for resale to employees under employees' stock purchase plan. The market value on December 31, 1932, was $3 per share but the directors will not agree to writing down this asset to market value.

(6) The life of Mr. B., President, is insured for $1,000,000 in favor of the company and the policy at December 31, 1932, had a cash-surrender value of $75,000. All premiums have been charged to expense, as the directors object to setting up cash-surrender value on the books.

(7) There are claims pending against the company which are estimated not to exceed $150,000.

(8) The property, plant and equipment accounts are stated at cost.

(9) Accounts payable include employees' savings deposits, $392,000.

Solution:

THE GOODENOUGH CORPORATION AND ITS SUBSIDIARIES

Consolidated balance-sheet, December 31, 1932

Assets

Current assets:			
Cash in banks and on hand (of which $272,000 is earmarked for a guarantee given on behalf of The British Goodenough Company, Ltd.)		$1,069,891	
U. S. government securities—at cost (market value, $490,000)		504,000	
Accounts receivable—customers	$2,338,302		
Less: reserve for doubtful accounts	194,000	2,144,302	
Inventories—at cost or market, whichever is lower		1,852,000	$ 5,570,193
Other assets:			
Special deposit in the Y Bank & Trust Co. (This deposit is subordinate to claims of all other depositors)		$ 100,000	
Accounts receivable—customers' (Payments are deferred until 1934)	$370,000		
Less: reserve for doubtful accounts	50,000	320,000	
Loan to officer		87,000	
Cash surrender value of life insurance policy		75,000	582,000
Property, plant and equipment—at cost		$9,866,000	
Less: reserves for depreciation		3,715,000	6,151,000
			$12,303,193

Liabilities and net worth

Current liabilities:			
Accounts payable and accrued liabilities		$2,194,900	
Provision for United States and British income taxes—payable in 1933		581,000	
Dividends payable		500,000	$ 3,275,900
British income tax—due January 1, 1934			253,300
Employees' savings deposits			392,000
Net worth:			
Capital stock-common, no par, authorized and issued	$5,000,000		
Less: treasury stock, 7,000 shares, held for resale to employees under employees' stock purchase plan—at cost	275,000	4,725,000	
Surplus		3,656,993	8,381,993
			$12,303,193

NOTE.—There are claims pending against the company which are estimated not to exceed $150,000.

THE BRITISH GOODENOUGH COMPANY, LTD.

Statement of balance-sheet conversion, December 31, 1932

			Conversion basis			
		Pounds	Rate at date of formation	Current rate Dec. 31, 1932	See notes	Dollars
Assets						
Property, plant and equipment at cost		£ 700,000			Note (1)	$3,266,000
Stock on hand at cost		170,000			Note (2)	527,000
Customers' accounts receivable		260,383		3.40		885,302
Cash at bank and in hand		85,262		3.40		289,891
		£1,215,645				$4,968,193
Liabilities and net worth						
Current trade liabilities		£ 78,500		3.40		$ 266,900
Reserve for income tax payable:						
Due January 1, 1933		90,000		3.40		306,000
Due January 1, 1934		74,500		3.40		253,300
Indebtedness to affiliated company		2,500			Note (3)	9,250
Reserve for depreciation		250,000	4.86			1,215,000
Reserve for bad and doubtful accounts		10,000		3.40		34,000
Profit and loss appropriation account:						
Balance, January 1, 1932	£ 12,145					
Net profit for year, 1932	298,000					
Total	£310,145					
Less: dividends	200,000					
Balance, December 31, 1932		110,145			Note (4)	*32,257*
Share capital:						
Authorized and issued:						
600,000 shares of £1 each		600,000	4.86			2,916,000
		£1,215,645				$4,968,193

NOTE (1)

The property, plant and equipment account should be converted on the following basis:

£600,000	at the rate prevailing at the time the company was formed ($4.86)	$2,916,000
£100,000	at the average rate prevailing at the time of installation ($3.50)	350,000
£700,000	Totals	$3,266,000

NOTE (2)

The stock of goods on hand is to be valued at the lower of cost or market. Therefore, the goods shipped by the parent company, which are still on hand at the foreign subsidiary at December 31, 1932, should be valued at 10% below cost.

The problem states that "of the stock on hand £160,000 represents goods purchased from the Goodenough Corporation, the parent company, at its cost of $540,000 plus freight to England of $36,000."

The inventory cost (540/576 of £160,000)	£150,000
Should be reduced by 10%	15,000
To obtain the market value of	£135,000
To which should be added:	
The freight to England (£160,000–£150,000)	10,000
and the cost of the remaining British stock	10,000
To obtain the valuation, in pounds, of the inventory of the Britsh company	£155,000
The current rate of exchange is used in converting the inventory into dollars. (155,000 × $3.40)	$ 527,000

NOTE (3)

The indebtedness to the parent company is converted at the actual dollar cost of . . . . $ 9,250

NOTE (4)

The balance in the profit-and-loss (surplus) account, is the excess of capital stock, liabilities and reserves, over the assets as stated in terms of dollars $ 32,257

THE GOODENOUGH CORPORATION

Consolidated balance-sheet—working papers December 31, 1932

Assets	Consolidated balance-sheet of the Goodenough Corporation and its domestic subsidiaries	The British Goodenough Company Ltd.	Adjustments Debit	Adjustments Credit	Inter-company eliminations	Consolidated balance-sheet
Cash in banks and on hand	$ 880,000	$ 289,891		$ 100,000 (1)		$ 1,069,891
U. S. government securities	504,000					504,000
Accounts receivable	1,910,000	885,302		87,000 (3) 370,000 (4)		2,338,302
Inventories	1,325,000	527,000				1,852,000
Property, plant and equipment	6,600,000	3,266,000				9,866,000
Company's own shares	275,000					275,000
Due from The British Goodenough Company, Ltd.	10,000			750 (2)	9,250 (A)	
Investment in subsidiary company, at cost	2,916,000				2,916,000 (B)	
	$14,420,000	$4,968,193			$2,925,250	
Special deposit in the Y Bank & Trust Company			$ 100,000 (1)			100,000
Loan to officer			87,000 (3)			87,000
Accounts receivable—deferred			370,000 (4)			370,000
Cash surrender value of life insurance policy			75,000 (6)			75,000
						$16,537,193

Liabilities and net worth						
Accounts payable and accrued liabilities	$ 2,320,000	$ 266,900	$ 392,000 (7)			$ 2,194,900
Provision for income taxes	275,000	559,300				834,300
Dividend payable	500,000					500,000
Indebtedness to affiliated company		9,250			$ 9,250 (A)	
Reserve for doubtful accounts	210,000	34,000	50,000 (5)			194,000
Reserve for depreciation	2,500,000	1,215,000				3,715,000
Capital stock:						
The Goodenough Corporation	5,000,000					5,000,000
The British Goodenough Company, Ltd.		2,916,000			2,916,000 (B)	
Surplus:						
The Goodenough Corporation	3,615,000		750 (2) 32,257 (8)	75,000 (6)		3,656,993
The British Goodenough Company, Ltd.		*32,257*		32,257 (8)		
	$14,420,000	$4,968,193			$2,925,250	
Reserve for doubtful accounts—deferred				50,000 (5)		50,000
Employees' savings deposits				392,000 (7)		392,000
			$1,107,007	$1,107,007		$16,537,193

Explanatory adjustments

(1) To transfer the $100,000 on deposit in the Y Bank & Trust Company into a separate account.
(2) To write down the balance due from the British company to the actual cost.
(3) To transfer the loan to officer of $87,000 to a separate account.
(4) To segregate the accounts receivable which are not due until 1934.
(5) To segregate that portion of the reserve for doubtful accounts applicable to the deferred receivables.
(6) To set up the cash surrender value of the life insurance policy on the life of Mr. B., President.
(7) To transfer the amount of the employees' savings deposits from accounts payable.
(8) To transfer the decrease in the net worth of the subsidiary company to the surplus account of the parent company.

NOTES—

The cash surrender value of the life insurance policy taken up in the balance-sheet under adjustment number (6), could be shown as a footnote on the balance-sheet.

No adjustment is made in the balance-sheet for an additional reserve against the accounts receivable of the British company, as noted under (c) in the problem. However, if a certificate were required, this point would have to be covered, either by (1) increasing the reserve, or (2) commenting upon its inadequacy.

No. 3 (25 points):

On the basis of the following information prepare:

1. An assembly sheet in columnar form to arrive at the figures for the assets and liabilities of the "New Company." No journal entries, formal balance-sheet or work schedules are required.
2. A statement showing the items of which the capital surplus of the "New Company" is composed.

The P Company was an operating and holding company whose position at October 1, 1932, was shown by the following balance-sheet:

Assets	
Cash	$ 150,000
Accounts receivable, less reserve	200,000
Inventories	750,000
Marketable securities—present value	500,000
Investment in subsidiary companies	4,700,000
Fixed assets, less depreciation	8,000,000
Prepaid expenses	50,000
Deficit	1,300,000
	$15,650,000
Liabilities	
Accounts payable	$ 300,000
Bank loan	1,000,000
Trade notes payable	170,000
Unpaid bond interest	280,000
First-mortgage 7% bonds	4,000,000
Eight per cent cum. preferred stock (unpaid dividend $160,000)	2,000,000
Common stock 1,240,000 shares no par	7,900,000
	$15,650,000

The P Company had three subsidiaries. It owned the entire capital stock of the "A", the "B" and the "C" companies and all the bonds of the "A" Company. Their balance-sheets at October 1, 1932, were as follows:

Assets	"A" Company	"B" Company	"C" Company
Cash	$ 50,000	$ 20,000	$ 25,000
Accounts receivable, less reserve	10,000	1,000	2,000
Inventories	250,000	150,000	300,000
Land	2,300,000	1,400,000	1,000,000
Buildings, plant and equipment	700,000	350,000	200,000
Prepaid expenses	20,000	2,000	4,000
Deficit	200,000	70,000	120,000
	$3,530,000	$1,993,000	$1,651,000

Liabilities	"A" Company	"B" Company	"C" Company
Accounts payable	$ 30,000	$ 10,000	$ 15,000
Notes payable	50,000		100,000
Unpaid bond interest		90,000	48,000
First-mortgage 6% gold bonds	1,800,000	1,000,000	800,000
Reserve for depreciation	150,000	93,000	88,000
Capital stock, $100 par	1,500,000	800,000	600,000
	$3,530,000	$1,993,000	$1,651,000

Each of the four mortgages covered land, building, plant and equipment but none of the other assets.

The P Company and its subsidiaries—excepting the A Company—had defaulted on mortgage interest and the P Company had not paid its preferred-stock dividends for the last four quarters. The outside holders of the several securities formed protective committees, and to forestall a receivership a reorganization committee was appointed to outline a rehabilitation plan. Under this plan the outside holders deposited their securities with a trustee. However, the bondholders of the C Company withdrew from the plan and foreclosed their mortgage. They recovered their claim in full, but nothing was left over.

The finally accepted reorganization scheme provided for the formation of a "New" company with 1,500,000 shares no-par-value stock to be set up at $5 per share. Part of this stock was to be issued in exchange for the deposited securities as follows:

Holders of P Company bonds were to get 175 shares and those of B Company bonds 130 shares for each $1,000 bonds including unpaid interest.

Holders of P Company preferred stock were to get 6 shares for each share of $100 par value including unpaid dividend.

To procure additional working capital $5,000,000 new 7% first-mortgage bonds were authorized, of which $2,500,000 were to be issued at 90. A bonus of 10 shares of the new stock was to go with each $200 of new bonds.

The creditor bank agreed to underwrite the above issue subject to the rights of old and new bond and stock holders and provided that the loan of $1,000,000 be paid out of the proceeds. The remainder of the capital stock was to be issued later in accordance with subscription rights given to the common stock holders.

The three sub-companies were dissolved and the New Company took over the assets and assumed the liabilities of the old companies in accordance with the plan and subject to the foreclosure on the C Company property. Fixed assets with relative depreciation were taken over at 50% of book value and the A Company mortgage was cancelled by the P Company. A reserve of $500,000 was set up for contingencies, such as loss on inventories, etc. Reorganization expenses were $100,000.

Solution:

"NEW COMPANY"

Assembly sheet showing the determination of the assets and liabilities of Companies P, A, B, and C taken over in the reorganization October 1, 1932

	Companies				Inter-company eliminations	Consolidated balance-sheet	Adjustments				Balance-sheet of new company
Assets	P	A	B	C			Debit		Credit		
Cash	$ 150,000	$ 50,000	$ 20,000	$ 25,000		$ 245,000	(7)	$ 1,250,000	(11)	$ 100,000	$ 1,395,000
Accounts receivable, less reserve	200,000	10,000	1,000	2,000		213,000					213,000
Inventories	750,000	250,000	150,000	300,000		1,450,000					1,450,000
Marketable securities—present value	500,000					500,000					500,000
Investment in subsidiary companies	4,700,000				(A) $4,700,000						
Fixed assets, less depreciation	8,000,000	2,850,000	1,657,000	1,112,000		13,619,000			(1)	1,112,000	6,253,500
									(9)	6,253,500	
Prepaid expenses	50,000	20,000	2,000	4,000		76,000					76,000
	$14,350,000	$3,180,000	$1,830,000	$1,443,000	$4,700,000	$16,103,000					
Discount on bonds							(7)	250,000			250,000
											$10,137,500
Liabilities and net worth											
Accounts payable	$ 300,000	$ 30,000	$ 10,000	$ 15,000		$ 355,000					$ 355,000
Bank loan	1,000,000					1,000,000	(7)	1,000,000			
Trade notes payable	170,000	50,000		100,000		320,000					320,000
			90,000	48,000		418,000	(1)	48,000			
Unpaid bond interest	280,000						(3)	280,000			
							(4)	90,000			

First mortgage bonds:												
P Company (7%)...........	4,000,000						4,000,000	(3)	4,000,000			
A Company (6%)...........		1,800,000			(A)	$1,800,000						
B Company (6%)...........			1,000,000				1,000,000	(4)	1,000,000			
C Company (6%)...........				800,000			800,000	(1)	800,000			
Preferred stock (8%) cumulative.	2,000,000						2,000,000	(5)	2,000,000			
Common stock................	7,900,000	1,500,000	800,000	600,000	(A)	2,900,000	7,900,000	(12)	7,900,000			
Deficit.......................	*1,300,000*	*200,000*	*70,000*	*120,000*			*1,690,000*	(1)	264,000			
								(9)	6,253,500	(12)	8,707,500	
								(10)	500,000			
	$14,350,000	$3,180,000	$1,830,000	$1,443,000		$4,700,000	$16,103,000					
Capital stock—authorized..........										(2)	7,500,000	7,500,000
Capital stock—unissued..........								(2)	7,500,000			*2,125,000*
P Bondholders—700,000 shares..........										(3)	3,500,000	
B Bondholders—130,000 shares..........										(4)	650,000	
P Preferred stockholders—120,000 shares..........										(5)	600,000	
New bondholders 125,000 shares..........										(8)	625,000	
Capital surplus..........								(8)	625,000	(3)	780,000	1,087,500
								(11)	100,000	(4)	440,000	
								(12)	807,500	(5)	1,400,000	
First mortgage 7% bonds..........										(6)	5,000,000	5,000,000
Treasury bonds..........								(6)	5,000,000	(7)	2,500,000	*2,500,000*
Reserve for contingencies..........										(10)	500,000	500,000
									$39,668,000		$39,668,000	$10,137,500

Adjustments

(1) To write off the fixed assets, unpaid bond interest, and bonds of C Company, whose bondholders foreclosed their mortgage.

(2) To record the authorized capital stock of the New Company—1,500,000 shares at $5. The problem reads 1,000,000 shares. This must be a typographical error inasmuch as 1,075,000 shares were issued.

(3) To record the capital stock of the new company (stated value $5 per share) to be issued to the bondholders of P Company on the basis of 175 shares for each $1,000 bond held including unpaid interest.

(4) To record the capital stock of the new company to be issued to the bondholders of B Company on the basis of 130 shares for each $1,000 bond held including the unpaid interest.

(5) To record the capital stock of the new company to be issued to the preferred stockholders of P Company on the basis of 6 shares for each share of preferred stock held including unpaid dividends.

(6) To record authorized first mortgage 7% bonds.

(7) To record sale of $2,500,000 new bonds at 90 and payment of bank loan.

(8) To record bonus of 10 shares of stock with each $200 of bonds.

(9) To write down net fixed assets 50% by charge to deficit:

Total net fixed assets	$13,619,000
Less C Company's property	1,112,000
Remainder	$12,507,000
50% thereof	$ 6,253,500

(10) To provide $500,000 reserve for contingencies.

(11) To pay reorganization expenses.

(12) To close out old capital stock and deficit accounts to capital surplus.

New Company

Analysis of capital surplus at organization October 1, 1932

Excess of book value of old companies' securities over stated value of new stock issued therefor:		
P Bonds and interest	$ 780,000	
B Bonds and interest	440,000	
P Preferred stock	1,400,000	$2,620,000
Equity of P common stock (per books), completely eliminated:		
Capital stock	$7,900,000	
Less deficit	1,690,000	6,210,000
Total		$8,830,000
Less:		
Loss through foreclosure by C bondholders	$ 264,000	
Stock issued as bonus with bonds	625,000	
Writedown of 50% in fixed assets	6,253,500	
Reserve for contingencies	500,000	
Reorganization expenses	100,000	7,742,500
Capital surplus at organization		$1,087,500

Correspondence

A LAYMAN LOOKS AT THE BALANCE-SHEET

Editor, THE JOURNAL OF ACCOUNTANCY:

SIR: I sometimes wonder if it would not be a good plan for accountants to take a sabbatical year, as they say in the colleges, and during that time refrain absolutely from any technical consideration of accounts, accounting or accountancy. If in such sabbatical year they would engage in some totally different vocation and look objectively only upon financial statements and their preparation, it seems to me it would be helpful to all concerned. Every man whose calling occupies his entire time becomes inevitably somewhat dogmatic. He grows so familiar with the working tools, as they might be called, that he is unable to think without them, and he fails to remember that other people engaged in other vocations really have no knowledge of the highly distinctive nature of his occupation. Everyone knows of physicians who talk a language which the ordinary patient does not understand at all. Sometimes, of course, this is done for the sake of creating an impression of learning, but generally the fault is due to a lack of comprehension of the patient's medical ignorance. Everyone knows of lawyers who love to talk profoundly of rules of evidence and of jurisprudence in a way that is quite unintelligible to the laity. And, alas, most of us know of wearers of the cloth who couch their spiritual instruction in a vocabulary known only to the inner circle. It is not surprising, therefore, that accountants should have fallen into the same error; but some of them have gone even further than their brethren of the other professions. They impress us mightily, but they tell us comparatively little. We hear of earned surplus and reserves for depreciation and of depletion and obsolescence and income accounts and profit-and-loss accounts and heaven only knows how many more things which are merely words to us.

I have been much concerned in attempts to understand the reports of some of the companies which have helped me to lose my patrimony during the present lustrum. Up to the middle of 1929, I was perfectly content to have my profit-making companies pay me the dividends which I thought were richly deserved, and I was not much worried about figures which were put forth now and then in an attempt to tell me as much as the companies thought was good for my soul. It was the custom of most of us who flourished in those palmy days to glance occasionally at the balance-sheet—whatever that may mean—and to see that it bore the signature of an accounting firm. Sometimes the firm's name was well known to me because I played golf with one of the partners. At other times the names had an unfamiliar ring. It made no difference, however. Somebody apparently had made an investigation and was prepared to tell me and all the rest of the stock-holders that he thought all was well. Perhaps he did not even say so much as that. He may have said merely that he had audited the accounts and, subject to more qualifications than I had the patience to analyze, he appended his certificate. That also made no difference. The great point was that dividends were payable and were paid when they were due.

Now, however, we are learning by experience the importance of facts. Fancies in the past played their part and kept us in luxury, but they have gone and the places where they were know them no more. Today I want to know if there is any value at all in the stock of the companies whose engraved certificates lie fallow in my safe-deposit box. With an optimism wholly unreasonable, some of us still cling to a hope that in some day near or far we shall be able to sell those certificates for coin of the realm. And some outrageously confident persons even expect that the regime of the dividend will return. And so we are interested in knowing or in trying to know what is the actual condition of the companies, what they are doing, what they may do and where we stand as the owners. Therefore, we begin to turn to the accounts and to the accountants to find out.

The first thing that is presented to us is a balance-sheet. Now I have no genuine knowledge about the question of a balance-sheet. Presumably it is a statement of financial affairs in which the assets and liabilities at a certain date are set forth, and I know that if I compare the balance-sheet of 1933 with that of 1932 I should be able to discover whether the company has advanced or gone backward. Apparently, if one may believe in terminology, a balance-sheet is a sheet which balances. We all know that no company, save in some improbable incident of fate, can effect a true balance between assets and liabilities without a certain amount of manipulation, which may be called net income or surplus or deficit; but we don't believe that balance is essential to happiness. However, we are inclined to permit the perpetuation of the word balance-sheet, and we recognize it as a holy instrument of the accounting priesthood. Its consecration is almost a sacrament. Consequently we are concerned to ascertain what the balance-sheet is trying to tell us and to find out also what it is trying not to tell us, which is perhaps much more important.

It seems to me that it ought to be possible for a man of average intelligence to write a simple, straightforward statement to the effect that a company has operated, let us say, seventy-five per cent of the working hours of a year. During that time it has manufactured at a cost of $1,000,000 goods which it subsequently sold for $2,000,000 and that out of the difference, which I believe would be called gross profit, it has expended $100,000 for expenses not directly concerned with manufacturing, such as salaries of officers, light, heat, power, taxes, etc., and has written off, as the saying goes, $200,000 for physical deterioration of its plant and has set aside in real cash $100,000 to provide for emergencies (I am not speaking now of the reserves which often are no reserves at all but merely a matter of bookkeeping. Nothing is truly set aside in most cases. I can not believe that a reserve which is not represented by cash or its liquid equivalent is a reserve at all) and has expended for the promotion of sales $200,000 and has paid interest on its bonds amounting to $100,000 and has declared dividends on its preferred stock amounting to $200,000 and has added to its working capital $100,000 and has declared a dividend on the common stock of $100,000. Any of us could understand that. It ought to be quite within the bounds of possibility for a statement to be prepared, which might be called a balance-sheet, if it were necessary to follow that archaic tradition, which would reveal in plain, simple language the current value (and by that I mean the price at which an article could be sold in the ordinary, existing course of events) and the debts which would have to be paid, whether to note-holders or trade creditors, and the amount of honest surplus available for dividends if it were determined to wind up the company, and the amount owed to the company by people who could be safely relied upon to meet their obligations, and the amount of capital stock in the hands of share-holders, and the amount of bonded indebtedness and its interest which would have to be paid, and the result of operations for the past year and any other items indicative of fact. It should, I say, be possible to have such statements as these; and many of us trust that in the reorganization of all business relationships we shall have precisely what I have suggested.

But the accountant finds a difficulty in presenting to us a statement of accounts which is so plain that even the most uninformed among us can grasp its full significance. To begin with, there is the question of double-entry, and that itself is rather mystifying. Undoubtedly no one has discovered any other form of adequate presentation of accounts, but the trouble is that we who are outside the fane do not understand. I am not a bookkeeper and I am not an accountant and therefore, I fail to grasp what is perfectly clear to any one who knows the theory behind double-entry. It is not feasible for me to go back to school and to study bookkeeping, and my fellows in business and in the professions, except accountancy, are in the same position.

There was a time when the accountant seemed to think it necessary to be obscure, very much as lawyers and physicians did. Of late, of course, there has been an improvement and by the application of a good deal of thought it is possible to understand most of the elements in the financial accounts of a company. But we should like to have even more plainness. We are simple folk who yearn for full comprehension.

Not long ago a great accountant for whom I have profound personal regard informed me that if a man could not understand a balance-sheet it was such a man's own fault. He should educate himself to know all the significance of every item in every balance-sheet. With all due deference to my friend, I wish to say now, as I said to him, that no profession could adopt such an attitude as that and perform its full share of the world's work. We do not expect the physician to credit us with a knowledge of therapeutics. If we understood the healing art, we should not have to go to the physician. If we knew all about law we should not have to consult a lawyer. If we knew all about accounting we should not have to consult an accountant. So I maintain that, if the accountant is to continue in the practice of his profession, he must make that profession more and more intelligible by explaining the truth. I venture to say that if it were the practice of accountants never to issue a statement which a man of ordinary lay intelligence could not fully understand, the growth and prestige of accountancy would advance with a rapidity hitherto unknown. We need the accountant with the clear mind, the honest independence and, above all, with the God-given ability to present the facts so that the uninitiate can understand.

All this plea has been uttered many times and some accountants have joined in signing the petition for exposition, but we do not make the progress which we desire. The clouds of tradition still darken the day.

This letter is not written in any spirit of captious criticism. I know that there must be a technique of every profession and that the terminology of the technique must be more or less peculiar to its own profession. But I do honestly believe, and many accountants concur in this, that a great deal could be done in addition to what is being done to simplify and render commonly intelligible the statements which are prepared by accounting departments of companies and audited by professional accountants.

Yours truly,

INVESTOR

[We publish this letter because it reflects a somewhat general feeling among investors who are not acquainted with the technical aspects of accounts. Many of the criticisms which the letter contains are probably unjustified, but that fact does not make the letter less interesting. Furthermore, there are many accountants of high standing who have been arguing for years in favor of greater clarity and a departure from what our correspondent calls the dogmatic. —*Editor.*]

ACCOUNTING PRINCIPLES AND LOCAL STATUTES

Editor, THE JOURNAL OF ACCOUNTANCY:

SIR: We are again admonished, this time by Mr. George S. Hills, because of our practice of making up accounts with an eye single to fair and clear presentation of financial condition, not attempting to make of them, primarily, exhibits to a legal argument that state statutes have been observed.

Mr. Hills considers that the failure of accountants to make accounts to agree with his idea of implications of local statutes is "appalling," and he mentions the federal reserve *Bulletin*, federal income-tax form and form in the regulations under the securities act as bad examples. The federal securities act has for one of its principal objects the fair presentation of accounts; pursuing that object it has adopted the form which accountants approve but which appalls Mr. Hills. The federal forms are devised to exhibit the financial position of corporations so that it will be understood; even on the theories of Mr. Hills (with which I differ) as to implications of state laws, they are in harmony with the statutes of a majority of the states.

Mr. Hills holds that there is necessarily placed a legal interpretation on accountants' statements. Our statements are intended to be financial, not legal, documents, designed to convey information to laymen. Accounts can not be generally understood unless prepared on a consistent basis; yet we are told that accounts should be made variously as state statutes vary. "Practices adopted by one corporation are of little or no value as precedents to another."

Accounts prepared as we are told to prepare them would be unintelligible to all who were not informed as to the state of incorporation, the laws of that state at the date of incorporation and at the date of any transactions in capital stock, the steps taken or to be taken to free frozen surplus, and the conditions in which capital stock had been acquired; for all, or nearly all, states allow stock to be received in payment of debt not otherwise collectible and, in some other circumstances, irrespective of surplus.

Illinois and Pennsylvania have just changed their laws—are changes retroactive? What is the legal status of a corporation of Illinois that had acquired some of its stock in 1933, some earlier, some in settlement of debt, some from dissenting stockholders, and that has subsidiaries incorporated in other states at various dates and under various statutes? Is that matter for an accountant to decide?

As to the temporary freezing of surplus in some states when capital stock is acquired, I believe it is quite sufficient if the accountant make up the balance-sheet in the accepted manner adding to the surplus a note somewhat as follows:

"Of this surplus, $........ is invested in capital stock of the company and should not be distributed without legal advice until either the capital has been reduced formally or the stock again sold."

Having thus reported on the financial position the duty of the accountant is done. Such surplus is invested, not extinguished. Earned surplus can not be created by mere filing of a certificate, yet upon formal reduction of capital the surplus becomes unfrozen as it was before the purchase of capital stock. The procedure for formal reduction of capital is little more than a perfunctory filing of a certificate even in the states that require any action at all. We are told that surplus is reduced when shares are acquired. There is no authority nor any reason for such a statement. It is purely assertion without authority.

Surplus, as understood by accountants, by the federal government, and by business men is the excess of assets over all liabilities, including capital stock in the hands of others—after deducting treasury stock. The state of Massachusetts also takes this view, as demonstrated by the form of balance-sheet prescribed for reporting corporations. Taxes on surplus have been proposed and some have been enacted; I can not think that surplus manipulated as Mr. Hills would have it would be accepted as the basis of a tax. If it were, corporations could eliminate surplus at their discretion by issuing and repurchasing stock.

The financial position of a company that has repurchased some of its own stock is the same as it would have been if the stock had never been issued. The purchased stock is removed from actual liabilities. Legal fiction may say that for the purpose of some legal concept the liability remains, but we should not deal with such fictions beyond putting clients on notice to obtain legal advice on legal matters.

So far as I can find there is no state or federal law that purports to say how the financial position of a corporation shall be displayed on the balance-sheet, and wherever regulations do so they prescribe the form that Mr. Hills dislikes.

The less we attempt to embody legal fictions in our accounts the more useful they will be. We meet few more exasperating obstacles to clear accounts than the citation by clients of legal opinions that something not so frank satisfies legal requirements. Besides all that, it would be impertinent for us to trespass upon the territory of the lawyer. In effect we are asked to do this.

I have before me a special report of Prentice Hall, Inc., dealing with accounting provisions under some 1,000 codes; the report says that almost every code contains specific methods of accounting and that our work as accountants "will be governed in future by these codes." One feels like saying "Oh, yeah?"

We are asked to conform to (1) sound accounting, (2) accounting according to alleged requirements of 50 changeable local statutes, (3) accounting under the federal securities act provisions, (4) accounting governed by 1,000 codes, which are in process of revision and, (5) accounting as required by income-tax laws.

When we certify accounts we say that "in our opinion" they set forth fairly, etc. Our opinion is not changeable at the dictation of others. Shall we say that in our opinion accounts set forth fairly, etc., except as they are distorted to conform to what are alleged to be requirements of local statutes and 1,000 codes? Or shall we say that in our Illinois opinion they set forth fairly, etc., but in our Washington opinion they misrepresent?

Let us not be stampeded. The public looks to professional accountants for sanity unaffected by fantastic ideas of those without much accounting experience or knowledge.

Yours truly,

F. W. Thornton

Denville, New Jersey, March 6, 1934

Book Reviews

TAXATION OF FOREIGN AND NATIONAL ENTERPRISES. Volumes 2, 3, 4 and 5. *League of Nations*, Geneva.

Volume 1 of the League of Nations series in taxation of enterprises appeared in 1932 and reviewed the tax laws of enterprises in France, Germany, United Kingdom, Spain and United States of America. The new volume, 2, reviews the tax laws of twelve other European nations with special reference to taxes that might be assessed again in another country. The reviews of the laws of each country are by public officers concerned with the country's finances, and may be accepted as correct at the date they were written.

In considering the application to our own problems of the laws and methods of other countries we meet with the difficulty that foreign income taxes cover much of the same ground that is covered by our federal, state and municipal taxes. Thus, Belgium has an "income tax" which includes a tax on land and buildings, which apparently is the only tax on these assets. It is computed not on actual income from rents or otherwise, but is a tax on "cadastral" income: that is, a tax on estimated normal income, averaged for a period of years and payable whether the property realizes more, less or no rent. Substantially it is a tax based on the services rendered by the government, irrespective of actual profit or loss, not regulated in accordance with supposed ability to pay. A similar tax is imposed in the Netherlands.

The full schedules of rates given for each country can be of use as general indications of methods employed, but even though tax laws of European countries are more stable than ours they do suffer constant change, especially as to rates, and the exact figures given are probably out of date already.

Without doubt some of the countries of Europe want to be fair; the tax laws and regulations of Austria, Greece, Italy and the Netherlands contain much that is highly creditable to the integrity of those countries. The last named of these four, said to be the third in importance of colonial possessions and therefore deeply affected by double taxation, credits against total taxes of a taxpayer, assessed in the Netherlands, an amount equal to the tax that would have been assessed in each colony or foreign country on income arising in that colony or foreign country if assessed at the same rates and in the same way as it would be if earned in the Netherlands. This deduction from tax is allowed whether the amount actually paid in the colony or foreign country be greater or less than it would be as computed under Netherland rates, and it is allowed in some cases even if no tax has been paid abroad.

Italy has some of the most direct provisions; income from dividends may not be again taxed—it has already been taxed. If more money were wanted the rate of tax would be raised, but one tax would not be piled on another. Also, Italy has a "bachelor tax," but as it is not applicable to foreigners its mention in this book seems beside the question.

Other countries have laws that are greatly modified by treaties and by reciprocity clauses. The Netherlands collects tax from branches or subsidiaries of foreign corporations "on the basis of their own results (accounts)." Other countries allocate profits and income on various arbitrary bases, several fixing the profit of a selling subsidiary of a foreign manufacturer at one-third of the whole profit, leaving two-thirds as the share accruing from manufacturing processes.

There is allowed to the administrators of the tax laws in European countries an amount of discretion that we dare not entrust to our officers. There seems to be an absence of a mass of disputed cases dragging along, subject to appeals to law courts and boards of lawyers. The officers in charge of collections can settle nearly all disputes.

Some few countries have such complex laws that reciprocity seems afar off; Switzerland, with its twenty-odd canton governments is almost as badly mixed in the matter of income taxes as we are; Czechoslovakia, with tax piled on tax, regulation piled on regulation, is another difficult case.

Almost every review in this book speaks of "balance-sheets," meaning balance-sheets plus profit-and-loss accounts; perhaps they call our six-column trial balance a balance-sheet.

Book 3 is a study similar to that in book 2, but dealing with countries other than European, and, strangely enough, with the three states, New York, Massachusetts and Wisconsin.

There is noted a novel provision in the law of British India: profits made by a foreign branch are not taxable until brought into India and if left for three years abroad become capital and are not taxed at all.

Japan has abandoned its old principle of taxing industry in proportion to the amount of its business irrespective of profit; now the tax is a tax on gains. Here, too, is an interesting variation from the usual: persons are taxable only on income of a "recurring nature"; profits of a casual kind, not part of the regular business, are not taxable to persons although taxable to corporations.

Mexico, objecting to double taxation within its own borders, collects no income tax from rental income because the real property is taxed locally.

Comparison of principles of taxation, as between New York, Massachusetts and Wisconsin, makes it evident that there is no more uniformity of ideas between the several states of the union than between the nations of the earth.

Generally speaking, this volume indicates that countries other than those of Europe vary in about the same way and to about the same degree as the European nations.

Book 4, a discussion of "Methods of allocating taxable income," by Mitchell B. Carroll, contains on page 13 a sentence that sums up accurately the difficulties of the situation. It says:

"Fiscal policy is influenced to an incalculable degree by the economy of countries."

This volume contains a discussion of methods used by the several countries and an exposition of the factors operating to do injustices. The more grasping countries, such as the Irish Free State, British India, etc., allocate to themselves the whole of the profits on goods manufactured or partly manufactured within their boundaries, no matter where sold, while Mexico, on the other side, allocates to itself all profit on goods sold in Mexico, leaving nothing for the parent manufacturing company. Goods made in the Irish Free State and sold by a subsidiary in Mexico, therefore, would be taxed on the full profit in Mexico and in the Irish Free State, even though the principle of exemption of foreign profits were accepted. Most other countries divide income between manufacturing and selling profit; some European nations make the division one-third to selling and two-thirds to manufacturing. We, too, allocate profit as between manufacture and sale. We have become a manufacturing nation, and it pays us to do so. We sell more than we buy. The nations of the British commonwealth divide profit between manufacture and sale, and some of them are manufacturing nations and some are not. British India is an exception, having quite a greedy arrangement.

There is a discussion of the accounting requirements of the several tax laws. It is stated that every country except Great Britain required the taxpayer to permit the authorities to examine his books of account.

Certain countries, the Netherlands and Greece, for example, tax only distributed profits—dividends—and the determination of the amount of dividend derived from trade in foreign territory offers another difficulty in avoiding double taxation.

There may be avoidance of double taxation or "relief" from double taxation. These are by no means synonymous. It is possible, after allocation has been made, to tax in each country the profit made in that country; or the home country may tax the entire profit, no matter where made, and allow a deduction from the tax of all or a part of the corresponding tax paid to a foreign country. The first plan is adopted by countries with relatively low rates of tax. It pays them to do so. The second plan is used by countries like the United States of America, which have tax rates so much higher than other countries that the rebate of the amount paid abroad still leaves a substantial tax to be paid here. It is immoral, of course, since Americans trading abroad have to compete with others who have to pay only the tax of the country in which they sell. It is a material discouragement to United States exports. If a person, having to pay part of his tax under the highest bracket, 63 per cent., has foreign income on which he pays abroad say 20 per cent., the United States collects 43 per cent. of that foreign income. If foreign income were tax exempt the United States would get nothing, and this is the rule in several countries. Much difference exists between the avoidance of double taxation and the "relief" which such laws as those of this country afford. More might have been said by the author of this book on this subject. There is an appearance of an assumption that the two plans are of about the same effect.

The last part of this volume is devoted to "pre-requisites for a régime of allocation." Here again the author condenses into one sentence the enormous difficulty of the case, thus:

> "It is impossible to formulate a general régime of allocation without establishing uniform principles of jurisdiction, and this involves the modification of the fundamental provisions regulating liability in some tax laws and the placing of limitations on such provisions in other laws."

There follows a discussion of changes that would be necessary to bring about uniformity in taxing principles. It is an intelligent discussion, with a strong underlying optimism. The author is presumably better informed than most of us—no doubt he is. The spectacle of the several nations, in the interest of abstract justice, agreeing on a plan that necessarily must help some and injure others would compare strangely with the spectacle of the same nations conferring for years without result on a plan for mutual disarmament that would help all.

Book 5, "Allocation accounting for the taxable income of industrial enterprises" by R. C. Jones, of Yale university, is an attempt to set forth a definite scheme of accounting applicable to enterprises operating in more than one jurisdiction. It opens with some general discussion, covering no ground not covered by volume 4, and then proceeds to give definite methods of accounting with illustrative entries, applicable when the nations have agreed to base their tax laws on the ideas of Professor Jones.

It is too soon to lay out such plans. We do not know that any of the conditions for their use will ever exist. When the nations agree (if they ever do) on any uniformity of taxing principles it will be time to arrange branch accounting in accordance with the agreement.

* * * * *

The whole work is an exhaustive display of the taxing methods, rates and inequities existing at the dates when the data were obtained. The comments are tinged with an optimism that few will share. We pay income taxes here and distrust all government professions of desire to be fair to foreigners just as we distrust the professions of governments that they desire peace while they clamor for bigger navies and increase other armaments. After all, double taxation is commercial war; the problem to be solved is not unlike that of disarmament, but is a little more difficult because a solution would neither increase income nor decrease expenses of governments.

F. W. THORNTON

FEDERAL TAX HANDBOOK 1933–1934, by ROBERT H. MONTGOMERY. *The Ronald Press Company*, New York. Cloth, 1091 pages.

It was with a chuckle of amusement that I opened Mr. Montgomery's *Federal Tax Handbook 1933–1934*. I had just been glancing over the 1933 form for individual income-tax returns and my eye was caught by the bland advice in bold type "IF YOU NEED ASSISTANCE IN PREPARING THIS RETURN, GO TO A DEPUTY COLLECTOR OR TO THE COLLECTOR'S OFFICE." "Just like that!" I thought to myself, "Why waste time and brain matter poring over a thousand or more pages of such eminent authorities as Montgomery and Klein, when a visit to the collector's office will solve all my problems in a jiffy?" However, remembering some of the types of political appointees I have met, also that the board of tax appeal has ruled that advice from treasury agents is not controlling, I addressed myself to the handbook with old-time confidence.

Most of us are fully aware that the act of 1932 made some radical changes in income-tax procedure, which by itself justifies a new edition of Mr. Montgomery's guide, the last one having been issued in 1929. What is not so generally appreciated is that there have been many rulings by the treasury department and decisions by the board of tax appeals and the courts which have in many cases upset or greatly altered long established interpretations. As the author well says "it is obvious that taxpayers can not afford to assume that they understand the application of the law because they made returns under it last year" (p. iii). Any accountant who has assisted in making out income-tax returns during the last two years will readily agree.

It may seem to some that issuing this edition at a time when congress was about to revise the income-tax law was premature. It is true that the bill before congress as these notes are written makes a few drastic changes, *e. g.* revamping the capital gain or loss provisions, depriving, in effect, all banks of the benefit of the exemptions with respect to tax-free securities, etc., but these are matters of common knowledge which the up-to-date accountant will take into consideration when consulting the handbook in preparing returns for 1934. As the act is not retroactive (at least at the present writing) all returns for 1933 and for fiscal years ending in 1934 will be governed by the act of 1932.

W. H. LAWTON

INTERMEDIATE ACCOUNTING, VOL. II, by JACOB B. TAYLOR and HERMANN C. MILLER. *McGraw-Hill Book Co., Inc.*, New York. Cloth, 476 pages. 1934.

The second volume of *Intermediate Accounting* maintains the high standard set by the authors in the first volume for lucidity and practicalness. Students in the second half of the second year at Ohio State university learn to apply the general principles of higher accounting acquired in the first half of the year to different types of business, such as consignments, instalment sales, branch houses, etc. They are then led into the more complicated accounting involved in mergers of corporations, consolidated balance-sheets and statements, and finally the accounting peculiar to the winding up of concerns—receiverships, liquidations and partnership settlements. A final chapter deals with accounting for and reports required in settlements of estates and trusts. As in the first volume, the method of teaching is mainly by setting concrete problems to be solved, of which there is an ample and well selected supply.

The appendix contains a brief survey of the fundamentals of United States income and estate tax laws, which seems rather out of place at this stage of accounting education. A student who has gone only this far would hardly be qualified to prepare an income-tax return, much less an estate tax return, but he may think he is! One is reminded of the old saw "A *little* learning is a dangerous thing!"

W. H. LAWTON

AUDITING, by the late LAWRENCE R. DICKSEE. 15th edition by STANLEY W. ROWLAND. *Gee & Co.*, London. Cloth, 1132 pages. 1933.

Perusal of Mr. Rowland's revision of Dicksee's *Auditing* in its fifteenth edition leaves the American reader somewhat at a loss whether to classify it as "a practical manual for auditors" according to its sub-title, or as a compendium of legal decisions affecting an auditor's responsibilities and liabilities. Out of eleven hundred and thirty pages only about three hundred are given to auditing practice and procedure, the rest of the book consisting of long extracts from English laws governing companies and very full decisions and opinions of English courts in cases where suits for damages were brought against professional auditors. The latter will be useful to American readers as indicating English precedents which may be cited in cases sure to arise under the securities act of 1933.

Two points discussed by Mr. Rowland will be noted by the student interested in comparing English with American practice. One is the matter of secret reserves. In the Royal Mail case, of which a very full report is given, much was said by counsel and judges as to the propriety of allowing directors to conceal secret reserves at all, although, as was said by one of the judges, this was practically irrelevant, the real issue being whether or not Lord Kylsant and Mr. Morland, the auditor, fraudulently concealed the fact from the shareholders. Nevertheless it started a controversy among professional accountants as to whether secret reserves were or were not ever justifiable. From Mr. Rowland's discussion it would seem that many of our English confreres are reluctant to condemn the practice entirely.

The other point is the question of the proper use of "certificate" as compared with "report." Quoting the section of the companies act of 1929 which requires auditors to make a report which shall state

"(a) whether or not they have obtained all the information and explanations they have required; and

"(b) whether, in their opinion, the balance-sheet referred to in the report is properly drawn up so as to exhibit a true and correct view of the state of the company's affairs according to the best of their information and the explanations given to them, and as shown by the books of the company." (Sec. No. 134.)

Mr. Rowland goes on to say: "It is rather important to notice that the report . . . falls into two parts, the one containing a statement of *fact*, and the other an expression of *opinion*," and as an expression of opinion, "that it must always be incorrect and misleading to call it a 'certificate,' a name which can be proper only to a statement of ascertained fact" (p. 316).

It is interesting to note that the author's opinion is quite in line with the form of "certificate" proposed by the Institute and approved by the New York stock exchange.

W. H. Lawton

A STUDY OF CORPORATION SECURITIES, by Arthur S. Dewing, *The Ronald Press Company*, New York. 427 pages. 1934.

Beginning with an historical sketch of the growth of corporations and their securities the author of *A Study of Corporation Securities* proceeds to consider the several kinds of corporation securities, discussing par and no-par stocks, stated capital, bonds, debentures and other securities, and covers the ground far better and more thoroughly than any similar work known to me.

Mr. Dewing has no small contempt for legal or other fictions; for example he says (pages 88–89) that

> "Stated capital may be increased or decreased at will; in 1933 there were almost countless cases in which the stated capital was reduced to absorb large capital losses. . . . Stated capital, which can be manipulated upward or downward according to the purposes of the stockholders and their directors, as a means of giving protection to creditors, is a form without substance."

The idea put forward at some congressional committee meetings that balance-sheets should be representations of absolute money values of assets and liabilities is disposed of effectually on page 78. The author shows that even at the date of organization, except perhaps in the case of financial institutions, the composite group of assets can not be absolutely valued in terms of money by any human being, but must be stated at arbitrary values—intelligent estimates—and he further expresses the opinion that a balance-sheet professing to give absolute money values is fraudulent.

Hardheaded and matter-of-fact throughout, this author has produced a book that does honor to his ability, his industry and his sense of justice. It is a real acquisition.

If anything be questioned it might be his opinion that the cumulative privilege is of little value as applied to preferred stock (page 171). At this time many large corporations are paying up arrears; for example Goodyear Tire, U. S. & Foreign Securities, Tung Sol Lamp, and no doubt, if business improves, U. S. Steel will pay up arrears on its preferred stock. These are only a few among many.

There is an excellent index, and it is needed, for the book is not easy reading and must be read and read again before it can be fully digested. It is not full of padding but is all meat.

It would be well if a copy could be placed in the hands of every congressman and senator, especially those who have a place in the council of the administration that deals with securities and the accounting for them.

F. W. Thornton

Accounting Questions

[The questions and answers which appear in this section of THE JOURNAL OF ACCOUNTANCY have been received from the bureau of information conducted by the American Institute of Accountants. The questions have been asked and answered by practising accountants and are published here for general information. The executive committee of the American Institute of Accountants, in authorizing the publication of this matter, distinctly disclaims any responsibility for the views expressed. The answers given by those who reply are purely personal opinions. They are not in any sense an expression of the Institute nor of any committee of the Institute, but they are of value because they indicate the opinions held by competent members of the profession. The fact that many differences of opinion are expressed indicates the personal nature of the answers. The questions and answers selected for publication are those believed to be of general interest.—EDITOR.]

INSTALMENT SALES OF SECURITIES ON BALANCE-SHEET OF INVESTMENT COMPANY

Question: We have clients whose business is buying and selling securities. They sold a considerable amount of securities and made an entry charging accounts receivable and crediting security sales. These sales were made on the instalment plan. However, at that time they did not purchase the securities from the syndicate which controls them, nor did they make any commitments of any kind.

At the close of their fiscal year, we find that this security sales account has a credit balance of some $15,000 and as the market has dropped considerably, they could purchase these securities for approximately $5,000, which would leave a profit of $10,000. Bear in mind, however, that they have not purchased these securities and the account as it now stands has a credit balance of $15,000. We would like to know how to handle this item on the balance-sheet.

Answer No. 1: As we understand the question, the company has made short sales of securities. These sales have been made on the instalment plan. Apparently the company's position at the close of the period is that it has instalment accounts receivable of $15,000, less such payments as have been made and has a liability to deliver such securities when paid for by the instalment purchasers.

We believe the corporation's balance-sheet should show the instalment accounts receivable in the usual manner and that on the liability side of the balance-sheet there should be shown an amount of $15,000. It does not appear that any further liability need be shown above the amount of $15,000 at the present time, since the corporation can purchase these securities for less than $15,000. We do not believe that in the circumstances as outlined, the corporation should take up any anticipated profit on the security sales made.

Answer No. 2: It is our opinion that the credit balance of $15,000 should be shown in the balance-sheet, among current liabilities, as follows:

Short sales

(December 31, 1932 (?) market value of securities sold, $5,000)....$15,000

It is also probable, because of the drop in the value of the securities, that a pertinent comment might be necessary with respect to instalment accounts receivable.

PRODUCTION COSTS WHERE PLANT HAS BEEN FULLY DEPRECIATED

Question: In the national recovery act a group of manufacturers may establish a code rule that no member shall sell below cost of reproduction. It transpires that one member of the group has in past years fully depreciated his plant and, therefore, is not now charging depreciation. The question is: Will its costs without the item of depreciation be comparable to the costs of other members of the group, which are properly charging depreciation?

Answer No. 1: Obviously costs of production without an item for depreciation would not be comparable with the costs of other members of the group. Depreciation, through wear and tear, and obsolescence continue uninterruptedly, irrespective of the clerical act of ceasing to retain a value for the plant account upon the company's books.

The mere fact that a concern has fully depreciated its plant in past years and is not therefore charging depreciation as part of its cost of production does not furnish a valid reason for the exclusion of that cost factor. To produce goods the concern must have a plant in operating condition, consequently a proper charge for the use of the plant as part of the cost of production is necessary in order to obtain true costs.

However, in computing a cost of production which may be comparable upon a fair and equitable basis with other members of the group, care should be taken to see that the concern which has fully depreciated its plant in past years is not overburdened with maintenance and repairs. It is frequently found that where a plant has been written off a concern's books, items such as new machinery, which should be charged to plant account and extraordinary repairs which might be charged to reserve for depreciation, in ordinary circumstances, are in fact now being charged to operating expenses.

Answer No. 2: It is possible that although depreciation does not appear in the cost under that title it still might be represented by large charges for repairs or renewals which in effect might be additions to plant, charged off currently. This practice defeats the purpose of depreciation in that in place of a more or less uniform rate of expense to cover depreciation the expense occurs spasmodically, controlled by the physical necessity of alteration or improvement of the plant.

A fully depreciated plant which is still efficiently producing indicates two things: that depreciation has been improperly estimated and prior years overburdened with this overestimated expense and that current additions to plant (which almost any progressive business requires) are being treated in some unorthodox manner. If costs are used for technical and statistical information, conservative overestimates are as bad as underestimates. Occasional revision of depreciation rates to reflect the current circumstances would prevent full depreciation before the useful life of the plant had come to an end.

Should the balance-sheet show a fully depreciated plant this need not preclude taking depreciation as an element of cost in the income account. The net income carried to surplus could be entitled, "Net income after depreciation" and a surplus adjustment would be shown, "Reverse depreciation suffered in this operating period and reflected in income but already charged off in prior periods."

This question leads one to wonder what is the purpose of requiring that no manufacturers may sell below cost of reproduction. Is the purpose to limit each producer to produce only that which he can sell without loss or is the purpose to establish a minimum selling price based on representative costs of the producing group? In both cases costs and their calculation are important; however, should the manufacturer's costs be considered in relation to his own case alone and not compared with or related to the costs of other manufacturers, the need for very specific instructions and regulations as to what these costs should include would be imperative.

The question does not indicate whether the industry under consideration is one that obtains its cost by spreading the total expense over the total units produced (thus getting a unit cost of production where only a few important products are involved) or an industry that has such a diversity of related or unrelated products that the only feasible costs must be built up on a unit basis (with little relation to the total expenditure in that the aim is not to distribute every dollar of expense to some product but to estimate a standard cost).

Should the break-down method of cost be used, the costs on those products where few by-products were involved and where few processes and little overhead was arbitrarily split might be comparable. However, if built-up costs are involved it will, by giving prominence and general consideration to this type of costs, undoubtedly be helpful in the present development of cost accounting, but the great differences of methods and opinions will make the fixing of instructions and regulations extremely difficult.

ACCOUNTING FOR HEDGING OPERATIONS IN A COTTON MILL

Question: In order to protect their position in the cotton market, both with respect to inventory and future requirements, it is the practice of the mills to "hedge" by placing commitments for the purchase or sale of cotton futures. It is understood that the usual practice is to treat the profits and losses at the closing of the future contracts as an adjustment of the cotton-purchase account, thus in effect applying these figures to the cost of sales and inventory remaining at the balance-sheet date. I shall appreciate advice as to whether or not this is the usual practice and, if so, if there is a known method of determining whether or not these operations are for the protection of the firm's position in the cotton market or for purely speculative purposes. It would appear that such transactions carried on for the latter purpose should be treated as other income charges or credits.

With respect to these operations, deposits are made with brokers on account of the future commitments, these balances representing margin deposits only, as neither the brokers' nor the mills' accounts usually show the total purchase or sale price under the future commitments. It appears that in any event the deposits with brokers or their deposits with the mills should be shown as separate items on the balance-sheet. If the present market quotation with respect to future commitments is less than the contract price, it would appear that in stating the deposits with the brokers some description should be made to indicate the loss in these contracts. The question has arisen as to whether or not any notation is necessary on the balance-sheet if future commitments at the balance-sheet date show a profit. In other words, I am interested in knowing what treatment should be accorded items having to do with future commitments both on the balance-sheet and the income statement, either in the case of a favorable or unfavorable position at the balance-sheet date.

Answer No. 1: The hedging operations referred to are quite common among cotton mills and customers fabricating articles in which cotton is a basic factor. It is proper, in our opinion, to absorb the profits or losses arising from these transactions in the purchases or cost of sales accounts so long as the contracts made are intended to cover normal production requirements. It is frequently difficult, however, if not impossible, to determine what constitutes normality or actual requirements because of subsequent changes in customers' specifications. A review of the production schedule with the sales budget should disclose whether speculative contracts are being made or not.

Where purely speculative contracts are entered into without regard to inventory or customers' needs, there is no doubt the results of these transactions should be set up separately in the profit-and-loss account under "Other income" or "Other deductions."

Margins with brokers or deposits with mills against futures should be set up in the balance-sheet as a separate item or under "Other accounts receivable" so as to be kept separate and distinct from the trade receivables, especially if the cotton operations at the date of the balance-sheet show a profit.

If, however, the net contract prices of futures show a loss as compared with market prices, the margins or deposits may be applied as an offset. To cover such a situation, we recommend setting up under liabilities a special item somewhat as follows:

"Reserve for losses (to cover the excess of contract prices over market prices at ———— 193) on raw materials for future delivery (less margin deposits)."

Or the amount may be stated at the gross figure with the foregoing words in parenthesis omitted.

Profits on contracts for future delivery should not be reflected in the accounts, and if a company wishes to give publicity to such a statement of affairs the proper place for such information is in the president's letter accompanying the accounts.

Answer No. 2: (a) *Re* paragraph 1: The profit or loss on hedging should be a part of the cost of sales.

We do not know of any method of determining whether or not a future transaction is a hedge or a speculation other than to ascertain the conditions prevailing when the transaction occurred. For instance, if a mill is overstocked in view of probable sales within a reasonable period, the sale of a future would reduce the long position and would therefore be a cost-of-sale item. The results of the ordinary hedge (such as buying futures upon receipt of sales orders for later production) should also be included in cost of sales.

The purchase of futures in anticipation of orders would be a speculation, inasmuch as it can not be determined, at that time, whether or not the price will be less when the order is received than the cost of the future.

(b) *Re* paragraph 2: Deposits with brokers should be shown as a separate item, with explanations as to the amounts involved.

If the future commitments indicate a loss at the balance-sheet date, the amount of the loss should be indicated or, preferably, a reserve should be provided. If the future commitments indicate a profit, a notation of the amount might be made, but conservative practice would preclude the inclusion of such "profit" in current income.

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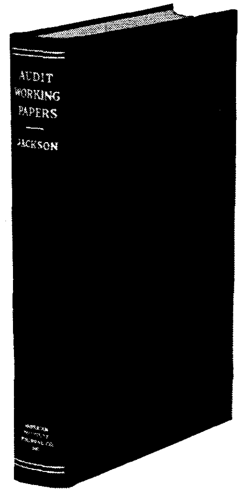

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